

# Technische Unterlage VTC CD-VU4085

## SPECIFICATIONS

### AV MASTER AMPLIFIER section

#### • When SURROUND is OFF

FRONT : 2ch x 45W (8Ω), 0.09% (1KHz)  
Input Sensitivity Impedance : AUX : 250mV/20kΩ  
Frequency Response : AUX : 20-20KHz (-3dB)  
Channel Separation : 50dB  
S/N Ratio : AUX (HF-A) : 85dB

#### • When DOLBY PRO LOGIC is ON

FRONT : 2ch x 20W (8Ω), 0.09% (1KHz)  
CENTER : 1ch x 20W (8Ω), 0.09% (1KHz)  
REAR : 2ch x 10W (8Ω), 0.9% (1KHz)  
Frequency Response : CENTER : 20-20KHz (-3dB)  
REAR : 100-8KHz (-3dB)  
S/N Ratio : CENTER : 85dB  
REAR : 60dB  
Power Consumption : 210W  
Power Requirements : AC 230V, 50Hz  
Dimensions (W x H x D) : 275 x 107 x 280mm  
Weight : 8.2kg

### TUNER Section

#### • FM SECTION

Frequency Range : 87.5-108MHz  
Sensitivity (S/N 30dB) : 3.0μV (75Ω)  
Total Harmonic distortion : MONO : 0.2%  
STEREO : 0.4%  
S/N Ratio : MONO : 70dB  
STEREO : 65dB

#### • AM SECTION

Frequency Range : 522-1620KHz  
Sensitivity : 600μV  
Total Harmonic distortion : 2.0%  
Dimensions (W x H x D) : 275 x 94 x 294mm  
Weight : 2kg

### CASSETTE DECK Section

Track System : 4-track, 2-channel stereo  
Recording System : AC bias  
Erasing System : AC erasing  
Tape Speed : 4.8cm/sec  
Motors : DC motor  
Frequency Response : Normal : 40-14,000Hz  
CrO<sub>2</sub> : 40-15,000Hz  
Metal : 40-16,000Hz  
FF and REW : 120 sec (C-60 tape)  
Wow and Flutter : 0.25% (JIS, WRMS)  
S/N Ratio : Dolby OFF : 55dB (CIR/ARM)  
Dolby B ON : 65dB (CIR/ARM)  
Dolby C ON : 75dB (CIR/ARM)  
Dimensions (W x H x D) : 275 x 107 x 280mm  
Weight : 2.7kg

### COMPACT DISC PLAYER Section

#### • AUDIO

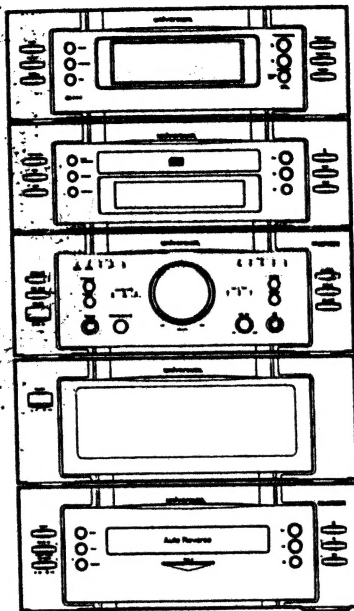
Channel : 2 ch  
Frequency Response : 20-20,000Hz ± 2.5dB  
S/N Ratio : 90dB (HF-A Filter)

#### • SIGNAL

Sampling Frequency : 44.1KHz  
Error Condition Method : CIRC  
Decoding D/A : 16 bit Linear  
Low Bandwidth Filter : 8 times oversampling digital filter

#### • PICK-UP

Method : Non-contact optical reading  
Source of light : Semiconductor Laser  
Wave Length of light : 780nm  
Dimensions (W x H x D) : 275 x 94 x 280mm  
Weight : 2.4kg



UTS-Nr. : 999 QUELLE  
Best.Nr. : 0380352/01  
Ger. Bez. : UNIVERSUM-BAUSTEIN-ANLAGE

GKz : G GERAET  
WGT : 650 MICRO-/MINI-ANLAGEN  
KD-Sektor : R RUNDfunk  
BaumNr. : 00 KEIN DIAGNOSEBAUM VORHANDEN  
Klassierung : STG STEREO., TUNER, VERST., STEUERUNG  
IFW-FehlerGr. : 205 RDF., VERST., TB., PHONO, CD, CB  
Type/Privileg/Universum.Nr : VTC-CD-VU4085  
Beschreibung : 5 BAUSTEINE  
VK-Preis : 998.00

Serviceart : 01 QUELLE-TKD  
Garantie fuer Kunden : 06 Monate  
Sondervereinbarungen : 0 SIEHE SERVICEART



CAUTION  
VAROI  
WARNING  
ADVERSEL  
DANGER  
VORSICHT

VISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.  
AVVERTENZA OLET ALTA RAZIONE LASER BATTENTE LA CASSA BATTERIA.  
OFTVILIG LASERSTRÅLING NÅR DEKKEN DEL AV ØPNINGEN BETRÆKTES. EL STRÅLEN  
OFTVILIG LASERSTRÅLING NÅR ÅPNINGEN ÅPNESS. UNNSØK UNGSTREKKE FOR STRÅLEN.  
VISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM.  
UNSCHEENBARE LASERSTRÅLING NEMER ÅPNEGGINGEN ØPNINGEN NEMER STRÅLEN. ALLES'ZEN

#### SHOCK, FIRE HAZARD SERVICE TEST:

CAUTION: After servicing this appliance and prior to returning to customer, measure the resistance between either primary AC cord connector pins (with unit NOT connected to AC mains and its Power switch ON), and the face or Front Panel of product and controls and chassis bottom.  
Any resistance measurement less than 1 Megohms should cause unit to be repaired or corrected before AC power is applied, and verified before return to user/customer.  
Ref.UL Standard NO.1492.

#### NOTE ON SAFETY:

Symbol ⚡ : Fire or electrical shock hazard. Only original parts should be used to replace any part with symbol ⚡. Any other component substitution (other than original type), may increase risk or fire or electrical shock hazard.

CLASS 1  
LASER PRODUCT

Best.-Nr.:

038.035.2

038.036.0

038.037.8

038.038.6

### Leisten Sie einen Beitrag zum Umweltschutz

- Verbrauchte Batterien und Akkumulatoren (Akkus) gehören nicht in den Hausmüll.
- Sie können sie bei einer Sammelstelle für Altbatterien bzw. Sondermüll abgeben.
- Informieren Sie sich bitte bei Ihrer (Ihre) lokale(n) Recycling-Symbol können Sie auch in den Quelle-Verkaufsstellen Agenturen und TKD-Stellen abgeben.

### Umwelthinweise

Wenn dieses MIDI-BAU-STEINSET eines Tages ausgedient hat, sollten Sie es nicht einfach in den Hausmüll werfen. Sicher gibt es in Ihrer Gemeinde einen Wertstoff- oder Recyclinghof, über den Altgeräte angenommen und einer Verwertung zugeführt werden.

• Machen Sie sich diese kleine Mühe - unserer Umwelt zuliebe.

• PE für Polyethylen  
PP für Polypropylen



PS für Polystyrol  
02 = PE-HD  
04 = PE-LD

#### WARNING

All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically.  
When repairing make sure that you are connected with the same potential as the mass of the set via a wrist strap with resistance of 100kΩ.  
Keep components and tools also at this potential.

#### ATTENTION

Tous les IC et beaucoup d'autres semi-conducteurs sont sensibles aux décharges électrostatiques (ESD). Une manipulation délicate pendant la réparation peut réduire la durée de vie de l'appareil.  
Lors de la réparation, assurez-vous d'être connecté au même potentiel que la masse de l'appareil à l'aide d'une ceinture de sécurité à résistance de 100kΩ.  
Gardez les composants et les outils également à ce potentiel.

#### ESD

Alle IC und viele andere Halbleiter sind empfindlich gegen elektrostatische Entladungen (ESD). Unvorsichtige Behandlung bei der Reparatur kann die Lebensdauer drastisch verkürzen.  
Sorgen Sie dafür, dass Sie im Reparaturzustand mit dem Massepotential des Gerätes verbunden sind.  
Halten Sie Elektroden und Hilfsmittel ebenfalls auf diesem Potential.

KAT. 984

DATUM 09.09.98

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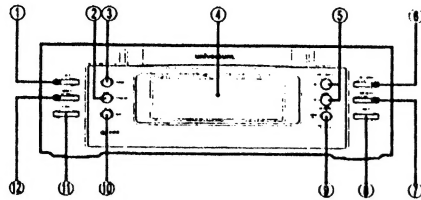
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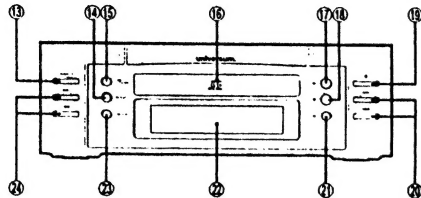
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## Bedienungselemente

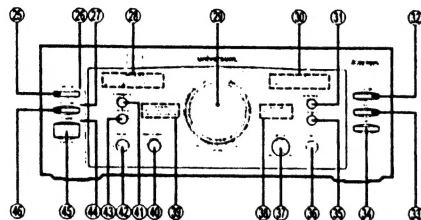
### RDS-Tuner



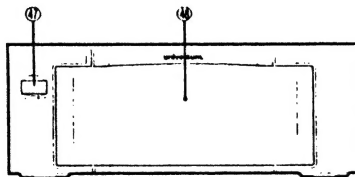
### CD-Spieler



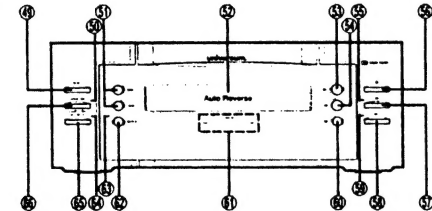
### Verstärker



### VU-Meter



### Cassettendeck



## Bedienungselemente und Funktionen

### VU-Meter

- ① **RANGE** = Ändern der Empfindlichkeit
- ② **VU-Pegelanzeigen**

### Cassettendeck

- ③ **RESET** = Bandzählwerk zurückstellen
- ④ **REVERSE** = schneller Cassettenrücklauf Seite „B“
- ⑤ **PLAY** = schneller Cassettenvorlauf Seite „A“
- ⑥ **PAUSE** = Cassettenschublade
- ⑦ **STOP** = Wiedergabe von Seite „A“
- ⑧ **STOP** = Wiedergabe von Seite „B“
- ⑨ **PAUSE** = Anzeige für PAUSE-Funktion
- ⑩ **OPEN/CLOSE** = Öffnen/Schließen der Cassettenschublade
- ⑪ **II** = Pausetaste
- ⑫ **REC** = Aufnahmetaste
- ⑬ **FUNCTION** = Funktionsanzeige für Aufnahme
- ⑭ **STOP** = Stoppaste
- ⑮ **CL/D** = Laufrichtungsanzeigen; die jeweilige Laufrichtung der Cassette wird angezeigt
- ⑯ **REPEAT** = Wiederholautomatik
- ⑰ **REPEAT** = Anzeige für REPEAT-Funktion
- ⑱ **REV MODE** = Anzeige für REV MODE-Funktion
- ⑲ **REV MODE** = Wahl der Cassettenwiedergabe
- ⑳ **DOLBY NR.** = Rauschunterdrückungssystem

## Bedienungselemente und Funktionen

### RDS-Tuner

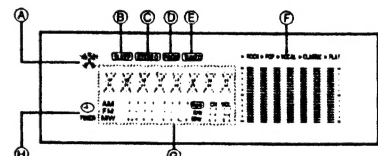
- ① **TIMER** = Aufrufen der Uhr- oder Timerzeit
- ② **ST/MONO** = STEREO/MONO-Umschaltung
- ③ **FM/AM** = Wahl des Frequenzbereichs; FM = UKW, AM = Mittelwelle
- ④ **Tunerdisplay**
- ⑤ **▲ TIME/TUNING/CH** = Einstellen der Zeit oder Frequenz nach oben (höhere Frequenzen)
- ⑥ **▼ TIME/TUNING** = Einstellen der Zeit oder Frequenz nach unten (niedrigere Frequenzen)
- ⑦ **FREQ MODE** = Wahl der Frequenzeinstellung; automatisch/manuell oder Aufrufen der gespeicherten Sender
- ⑧ **TIME MODE** = Einstellen der Uhr-/Alarmzeit
- ⑨ **CANCEL** = Löschen der gespeicherten Sender
- ⑩ **MEMO/SET-AUTO/MANUAL** = Automatische/manuelle Senderspeicherung
- ⑪ **RDS** = Radio Data System-Funktionen einschalten und wählen
- ⑫ **SLEEP** = Wählen der automatischen Ausschaltzeit
- ⑬ **DIMMER** = Einstellen der Anzeigehelligkeit für Tuner und CD-Spieler
- ⑭ **▶▶** = Titelwahl vorwärts/
- ⑮ **◀◀** = Titelwahl rückwärts
- ⑯ **II** = CD-Pause
- ⑰ **CD-Spielerdisplay**
- ⑱ **RANDOM** = Wiedergabe einer Zufallsreihenfolge
- ⑲ **◀◀** = Suchlauf rückwärts/
- ⑳ **▶▶** = Suchlauf vorwärts

### Verstärker

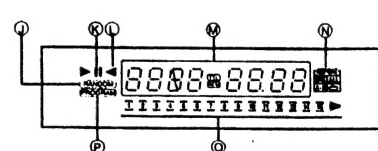
- Die Funktionsanzeigen erscheinen im Tunerdisplay ①
- ② **SURROUND** = Dolby Surround-Funktion ein-/ausschalten
- ③ **ANZEIGE** für eingeschaltete SURROUND-Funktion
- ④ **ANZEIGE** für eingeschaltete TEST-TON-Funktion
- ⑤ **SURROUND MODE** = Anzeige der gewählten Surround-Funktion
- ⑥ **VOL** = Lautstärkeregler, Gesamtlautstärke
- ⑦ **FUNCTION** = Anzeigen für die gewählte Funktion
- ⑧ **BASS/TREBLE** = Einstellen der Tiefen/Höhen um +/- 10 dB
- ⑨ **FUNCTION** = Wahl der Betriebsart
- ⑩ **TUNER** = Rundfunk
- ⑪ **TAPE** = Cassettenbetrieb
- ⑫ **CD** = CD-Wiedergabe
- ⑬ **AUX** = Wiedergabe von Zusatzgeräten
- ⑭ **MD** = Tonwiedergabe von einem MD-Gerät
- ⑮ **DISPLAY** = Wahl der Klangbildarstellung
- ⑯ **EQ-MODE** = Wahl des Klangbildes
- ⑰ **BALANCE** = Lautstärkeausgleich rechter/linker Kanal
- ⑱ **MIC** = Mikrofonanschluss 6,3 mm Ø
- ⑲ **MIC VOL** = Mikrofonmischregler
- ⑳ **DELAY TIME** = Anzeige S/M/L
- ㉑ **CENTER MODE** = Anzeige der Center-Betriebsart
- ㉒ **IR SENSOR** = Fernbedienungsempfänger
- ㉓ **CENTER M.** = Wahl der Center-Betriebsart
- ㉔ **Bereitschaftsanzeige ON/STANDBY**
- ㉕ **Bereitschaft** = rot
- ㉖ **Eingeschaltet** = grün
- ㉗ **POWER** = Netzschalter
- ㉘ **TEST TONE** = Signal zur Abstimmung aller Pegel

## Funktionsanzeigen im Tuner/CD-Spielerdisplay

### RDS-Tunerdisplay



### CD-Spielerdisplay



### RDS-Tunerdisplay

- ① **Surround-Anzeige**
- ② **SLEEP** Anzeige
- ③ **STEREO** Anzeige
- ④ **PRGM** = Senderprogramm-Anzeige
- ⑤ **TUNED** = Optimale Sendereinstellung
- ⑥ **EQ MODE** = Anzeige der Equalizer-Charakteristik ROCK - POP - VOCAL - CLASSIC und FLAT
- ⑦ **Funktion-, Sendernamen-, PTY-, Frequenz-, Zeit-, Balance, Bandzählwerk** anzeigen
- ⑧ **REAR LEVEL** = Lautstärkeeinstellung für räumliche Lautsprecherboxen
- ⑨ **CENTER LEVEL** = Lautstärkeeinstellung für Mittellautsprecher
- ⑩ **BASS** = Einstellen der Basswerte

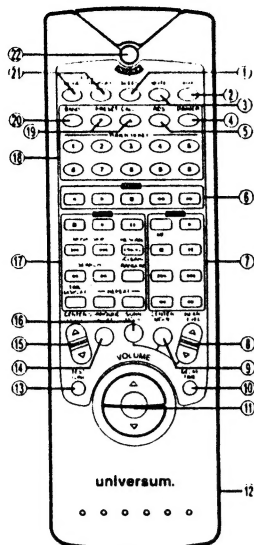
### TREBLE = Einstellen der Höhen

- ⑪ **TIMER** = Timer-Funktionsanzeige

### CD-Spielerdisplay

- ① **RANDOM** = Wiedergabe einer Zufallsreihenfolge
- ② **▶** = Anzeige für CD-/Cassetten-Wiedergabe
- ③ **II** = Anzeige der Pausenfunktion
- ④ **◀** = Cassettenspeicherung im Reverse-Mode
- ⑤ **Spieldzeit-/Titelnummernanzeige**
- ⑥ **Anzeige** der gewählten Repeatfunktion
- ⑦ **Titelnummernanzeige** in Balkenform
- ⑧ **PROGRAM** = Anzeige für Wiedergabe einer Programmreihenfolge

## Fernbedienung



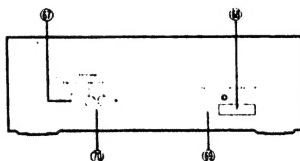
### Bedienungselemente und Funktionen

- 1 SLEEP = Wählen der automatischen Ausschaltzeit
- 2 Funktionstaste AUX
- 3 MUTE = Absenken der Lautstärke
- 4 DIMMER = Einstellen der Anzeigelichtstärke
- 5 RDS = Wählen der RDS-Betriebsart
- 6 Funktionstasten für Cassettenbetrieb:
  - ◀/▶ = Cassettenwiedergabe Seite „A“ oder „B“; ◀◀ = Suchlauf vorwärts, ▶▶ = Suchlauf rückwärts; ■ = Stopp; II = Pause

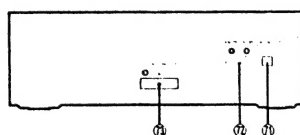
- 7 Funktionstasten für den MD Recorder
  - POWER = MD Ein- bzw. Ausschalten; ▶ = MD-Wiedergabe; ■ = MD-Stopp; II = CD-Pause; I◀◀ = Suchlauf rückwärts; ▶▶ = Suchlauf vorwärts; I◀◀ = Titelwahl rückwärts, ▶▶ = Titelwahl vorwärts
- 8 REAR LEVEL = Lautstärkeeinstellung für hintere Lautsprecher
- 9 CENTER MODE = Wahl der Center-Betriebsart
- 10 DELAY = Einstellstasten für die Zeitverzögerung
- 11 VOLUME +/- = Lautstärkeeinstellung
- 12 Batteriefach (Rückseite) für 2x 1,5 V
- 13 TEST TONE = Signal zur Abstimmung aller Pegel
- 14 SURROUND = Surround-Funktion Ein-/Ausschalten
- 15 CENTER LEVEL = Lautstärkeeinstellung für Center- Lautsprecher
- 16 SURR MODE = Ein-/Ausschalten der SURROUND-Funktion
- 17 Funktionstasten CD-Spieler:
  - = CD-Stopp; ▶ = CD-Wiedergabe; II = CD-Pause; MUSIC SKIP I◀◀ = Titelwahl rückwärts; ▶▶ = Titelwahl vorwärts; PROG (CLEAR) = Speichern der CD-Titel/Löschen der Programmierung; SEARCH ◀◀ = Suchlauf rückwärts; ▶▶ = Suchlauf vorwärts; RANDOM = Zufallswiedergabe; TIME DISPLAY = Umschalten der Spielzeitanzeige; REPEAT 1/ALL = Wiederholautomatik, A-B = Wiederholung
- 18 1 - 0 = Aufrufen der Senderspeicher/CD-Titel
- 19 PRESET CALL = Aufrufen der gespeicherten Sender
- 20 BAND = Wählen des Frequenzbereichs FM (UKW) oder AM (Mittelwelle)
- 21 EQ MODE = Wahl des Klangbildes
- 22 POWER = Einschalten der Anlage aus Bereitschaft

## Anschlüsse der Geräterückseite

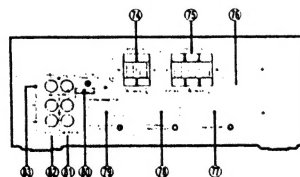
### RDS-Tuner



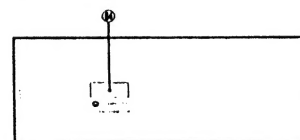
### CD-Spieler



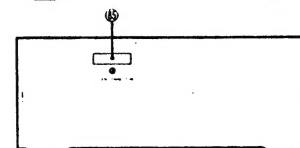
### Verstärker



### VU-Meter



### Cassettendeck



## Technische Daten

**Netzanschluß:**  
230 V ~ +6/-10% 50 Hz  
**Leistungsaufnahme:**  
210 Watt  
**Abmessungen in cm ca.**  
Breite 27,5 / Höhe 22,5 / Tiefe 27

### Verstärkerteil

**Maximale Ausgangsleistung:**  
2x 300 Watt bei Stereobetrieb  
**Lautsprechermindestimpedanz:**  
8 Ohm (Anschlußwert)  
Übertragungsbereich:  
von 40 Hz - 16 kHz 1,5 dB  
Übersprechdämpfung:  
30 dB bei 1000 Hz

### Pro-Logic-Betrieb

**Ausgangsleistung:**  
2x 200 Watt  
Hauptlautsprecher  
2x 50 Watt Surround links/  
Surround rechts  
1x 90 Watt Center-Kanal

### Frequenzgang:

Dolby Surround 100Hz - 7kHz,  
Matrix 20 Hz - 20 kHz  
Halt 100 Hz - 7 kHz

### Signal/Rausch-Verhältnis

(im Surround-Betrieb):

>75 dB  
**Verzögerungszeit:**  
20 ms; im Dolby-Betrieb auf 15 und 30 ms umschaltbar

**Verzögerungsverfahren:**  
digital

**Eingangsempfindlichkeit (Line-IN):**

250 mV

**Eingangsimpedanz:**

47 kΩ

### RDS-Tuner

- ① FM 75 Ω (UKW) = Antennenbuchse
- ② SYSTEM CONNECTOR ③ = Anschluß für Tuner-Systemsteuerung
- ④ RESET = Speicherrückstellaste
- ⑤ AM LOOP = Antennenanschlüsse für Mittelwellen-Rahmenantenne

### CD-Spieler

- ① DIGITAL OUTPUT = Digitaler Lichtleiterausgang zum Anschluß an ein digitales Aufnahmegerät, z.B. MD-Gerät
- ② REMOTE CONTROL TO MD = Fernsteueranschluß für MD-Recorder
- ③ SYSTEM CONNECTOR ④ = Anschluß für CD-Systemsteuerung (weißer Stecker)

### Verstärker

- ⑤ MAIN SPEAKER = Stereolautsprecheranschlüsse, Frontlautsprecher  
R = rechter Kanal (rot +)  
L = linker Kanal (schwarz -)

- ⑥ Pro Logic-Lautsprecheranschlüsse  
CENTER = Lautsprecheranschluß (rot +/-schwarz -) für Mittellautsprecher  
REAR = rückseitiger Lautsprecheranschluß  
R = rechter Kanal (rot +/-schwarz -)  
L = linker Kanal (rot +/-schwarz -)

- ⑦ Netzanschlußkabel 230 V/50 Hz
- ⑧ TO AM/FM TUNER ⑨ = Systemsteuerungskabel für den Tuner
- ⑩ TO COMPACT DISC PLAYER ⑪ = Systemsteuerungskabel für den CD-Spieler
- ⑫ TO CASSETTE DECK ⑬ = Systemsteuerungskabel für das Cassettendeck
- ⑭ SYSTEM CONNECTOR ⑮ = Systemsteuerungsanschluß für das VU Meter

**Maximale Eingangsspannung:**  
3,5 V

### Betriebsarten:

Dolby Pro Logic, Dolby 3 Stereo, Hall, Demo und Live  
**REAR** = Lautsprecheran 8 - 16 Ω  
**CENTER** = Lautsprecheran 8 Ω

### Tunerteil

#### FM-Bereich (UKW)

87,5 - 108 MHz  
Empfindlichkeit: 6 µV  
Hub: 22,5 kHz  
und S/R - 26 dB: 40 kHz  
Hub - 46 dB S/R: 40 µV  
Fremdspannungsabstand: >50 dB  
Pilotunterdrückung:

19 kHz = 40 dB

38 kHz = 50 dB

#### MW-Bereich

MW 521 - 1620 kHz  
Empfindlichkeit für MW 1500 µV  
26 dB S/N

### Cassettenteil

Übertragungsbereich Aufnahme und Wiedergabe:  
(-8 dB) 63 Hz - 12500 Hz  
Geschwindigkeitsabweichung: 1,0 %  
Tonhöhenstreuung: 0,3 %  
Tonband: Normal-Cassetten/Chrom (Eisenoxid, Fe<sub>2</sub>O<sub>3</sub>/CrO<sub>2</sub>)  
Gerauschspannungsabstand: 50 dB  
Löschdämpfung: 70 dB

### CD-Spieler

#### Optischer Tonabnehmer:

3-Strahlen-Laser  
Fehlerkorrektur: CIRC

#### D/A-Umwandler:

16-Bit-linear mit 8-fach Oversampling

- ① MD-PLAYER IN = Analoges Eingang eines MD-Spielers (Wiedergabe)  
R = rechter Kanal (rot)  
L = linker Kanal (weiß)  
(MD = Mini-Disk)

- ② AUX R/L = Anschluß für Zusatzgeräte (Wiedergabe)  
R = rechter Kanal (rot)  
L = linker Kanal (weiß)

- ③ REC OUTPUT = Analoges Ausgang für ein zusätzliches Aufnahmegerät, z.B. MD-Recorder  
R = rechter Kanal (rot)  
L = linker Kanal (weiß)

### VU-Meter

- ④ SYSTEM CONNECTOR TO AMPLIFIER ⑤ = VU-Meter Anschlußkabel zum Verstärker

### Cassettendeck

- ⑥ SYSTEM CONNECTOR ⑦ = Anschluß für Cassetten-Systemsteuerung

### Hinweise:

Die Verbindungskabel (A) - (B) - (C) - (D) des Verstärkers sind mit den entsprechenden Buchsen (A) - (B) - (C) - (D) der Einzelbausteine zu verbinden.

### Abschaltautomatik

Dieses Bausteinsatz besitzt eine Abschaltautomatik, um eine Überlastung des Verstärkerteils zu vermeiden. Hat sich die Anlage automatisch abgeschaltet, so schalten Sie mit der Taste POWER ② die Anlage ab.

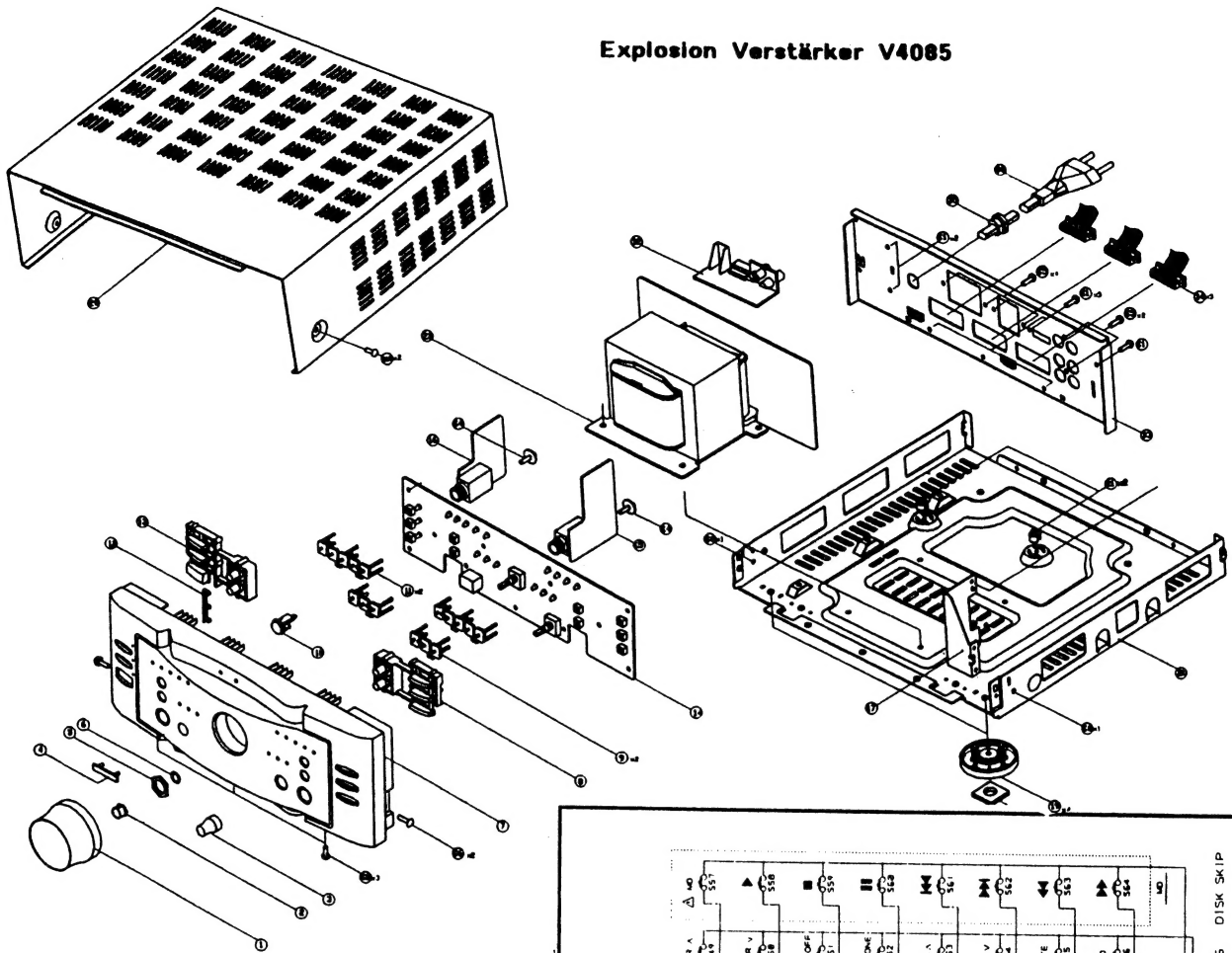
Nach ca. 5 Minuten können Sie die Anlage wieder anschließen und mit der Taste POWER ② einschalten.

## Lichtleiterkabel

Bild	ET-Nummer
<p>POC-15 A</p> <p>von Heimgerät zu Heimgerät</p>	<p>095.299.4</p> <p>1,5m</p>
<p>POC-15 A/B</p> <p>von Heimgerät zu Portable</p>	<p>095.300.0</p> <p>1,5m</p>



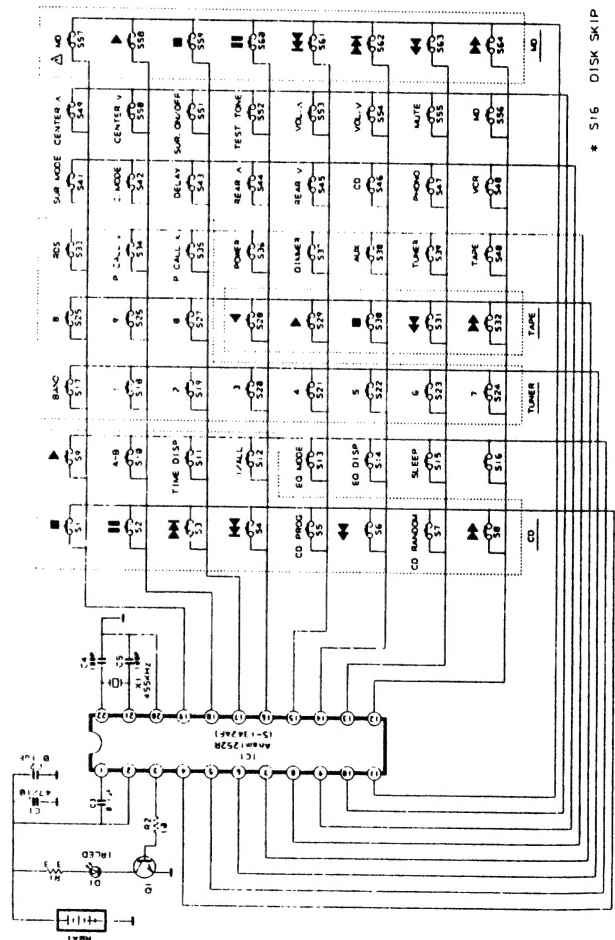
# Explosion Verstärker V4085



## IC71(ANAM1248AV)

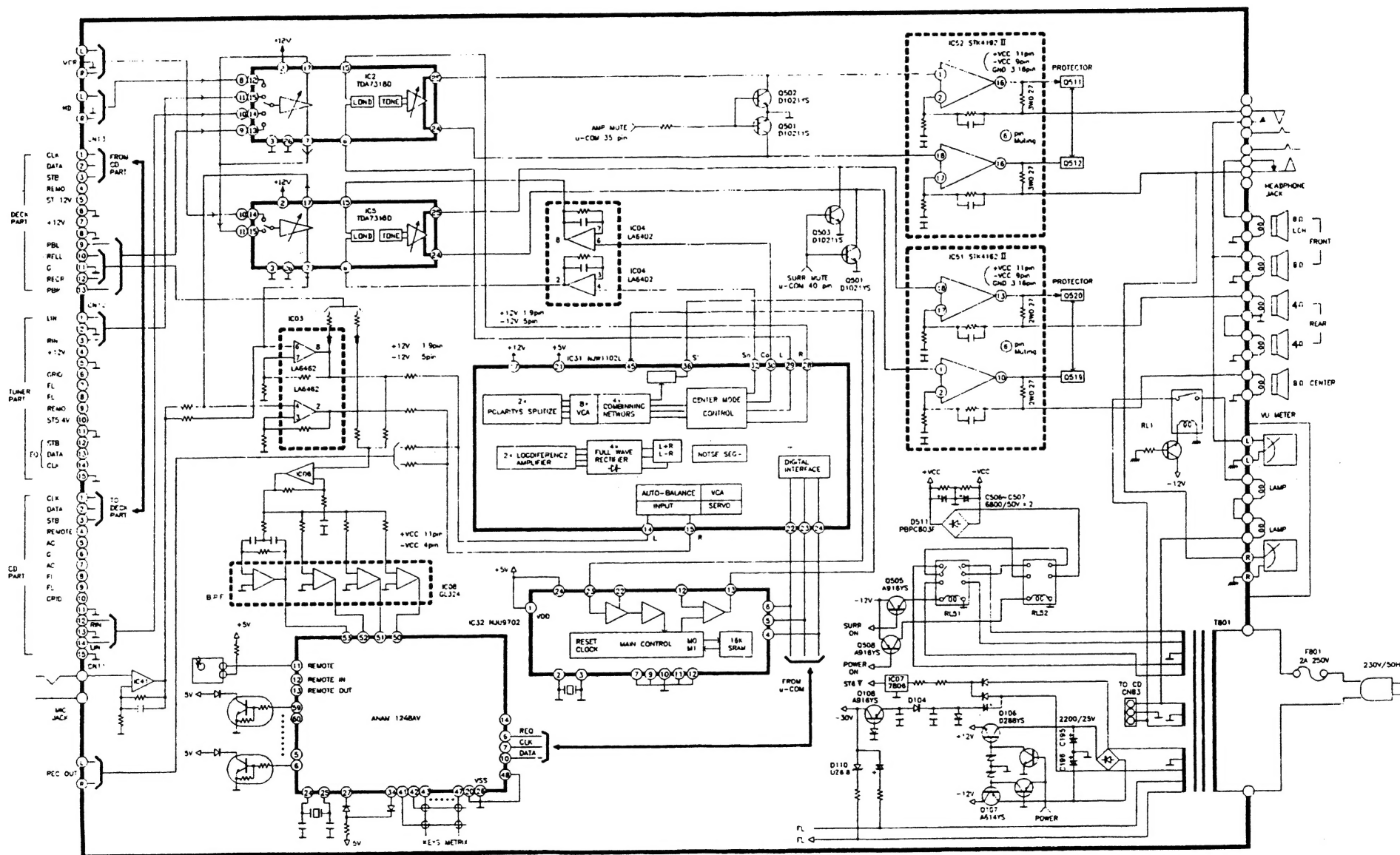
PIN No.	PIN NAME	I/O	DESCRIPTION	REMARK
89-91		I/O	CENTER MODE INDICATOR	
82, 83	P75-P77	I/O	82 PIN ON : H, 83 PIN OFF : H	
84	P00-P04	I/O	TEST TONE INDICATOR	
1-7		I/O	SURR ON/OFF, SURR MODE INDICATOR	
8, 9, 10	P05-P07	I/O	DISPLAY CONTROL DATA BUS 8 PIN REG, 9 PIN CLK, 10 PIN DATA	
11	INT O		SENSOR REMOTE INPUT	
12	INT I		BUS LINE REMOTE INPUT	
13	INT2/TC1		BUS LINE REMOTE OUTPUT	
15, 16	P14, P15	O	15 PIN : DATA, 16 PIN : CLK	FOR TDA7313
17, 18	P16, P17	O	17 PIN : DATA, 18 PIN : CLK	FOR TDA7318
23	RESET	O	MI COM RESET PORT	
24, 25	XIN, XOUT	I/O	CRYSTAL INPUT/OUTPUT	
27-31	P30-P34	O	FUNCTION LED DRIVE	
32-34	P35-P37	O	DELAY TIME LED DRIVE	
35	P40	O	AMP MUTE PORT	ACTIVE "L"
36	P41	O	POWER ON/OFF PORT	ACTIVE "L"
37, 39, 19	P42, P44, P20	O	EQ DISPLAY (19 PIN:STB, 37 PIN:CLK, 39 PIN:DATA)	TO TUNER MI COM
40	P45	O	SURR MUTE PORT	ACTIVE "L"
41-47	P48,P47,P50-P54	I/O	KEY METRIX	
48	VAREF		V ANALOG REFERENCE PORT	
50-53	P60-P63	I/O	180Hz, 400Hz, 2.5KHz, 6.3KHz A/D CONVERTOR (EQ LEVEL)	TO TUNER MI COM
56, 57	P66, P67	I	VR UP/DOWN DATA INPUT	
58	GND		+5V	
20, 26, 48	VSS		GND	

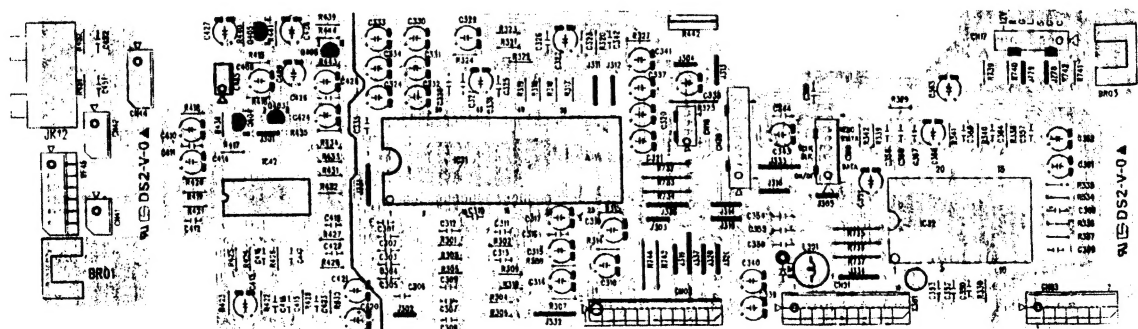
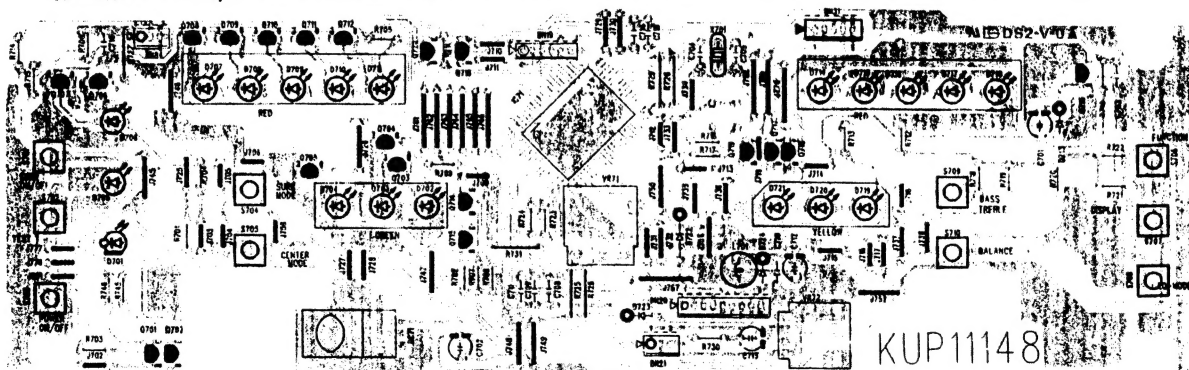
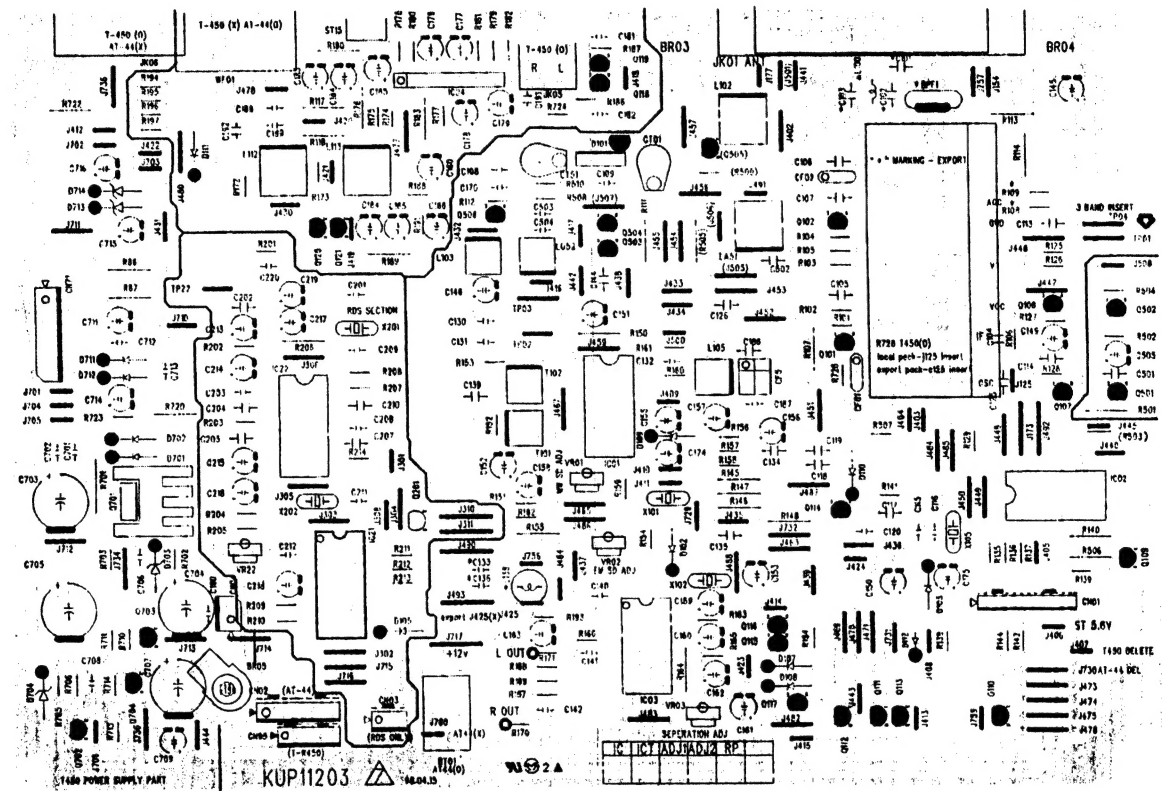
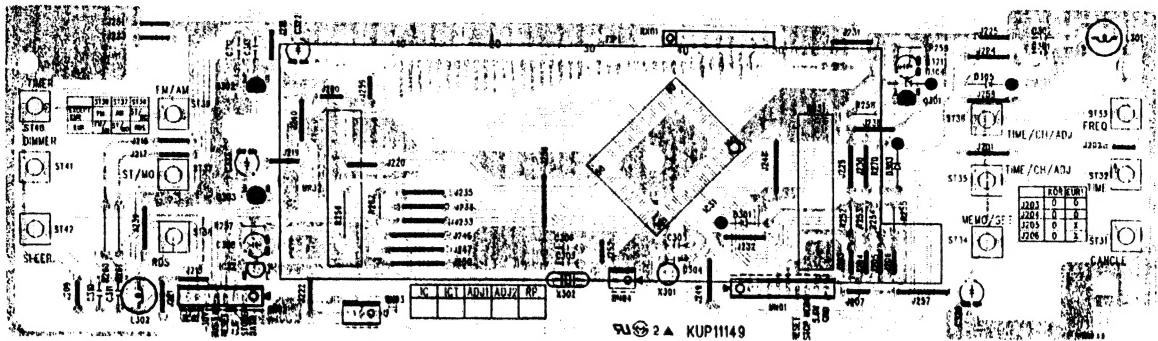
## REMOTE CONTROL SCHEMATIC DIAGRAM



\* S16 DISK SKIP

## 9



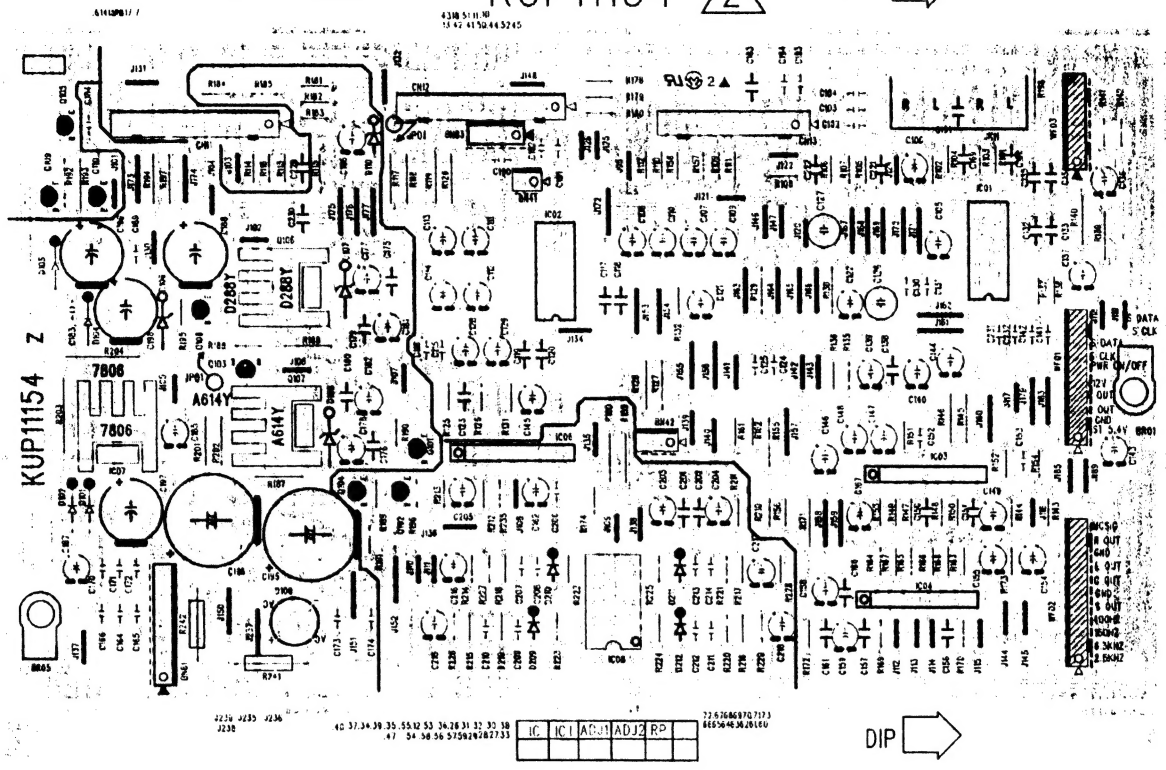


1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

KUP11154



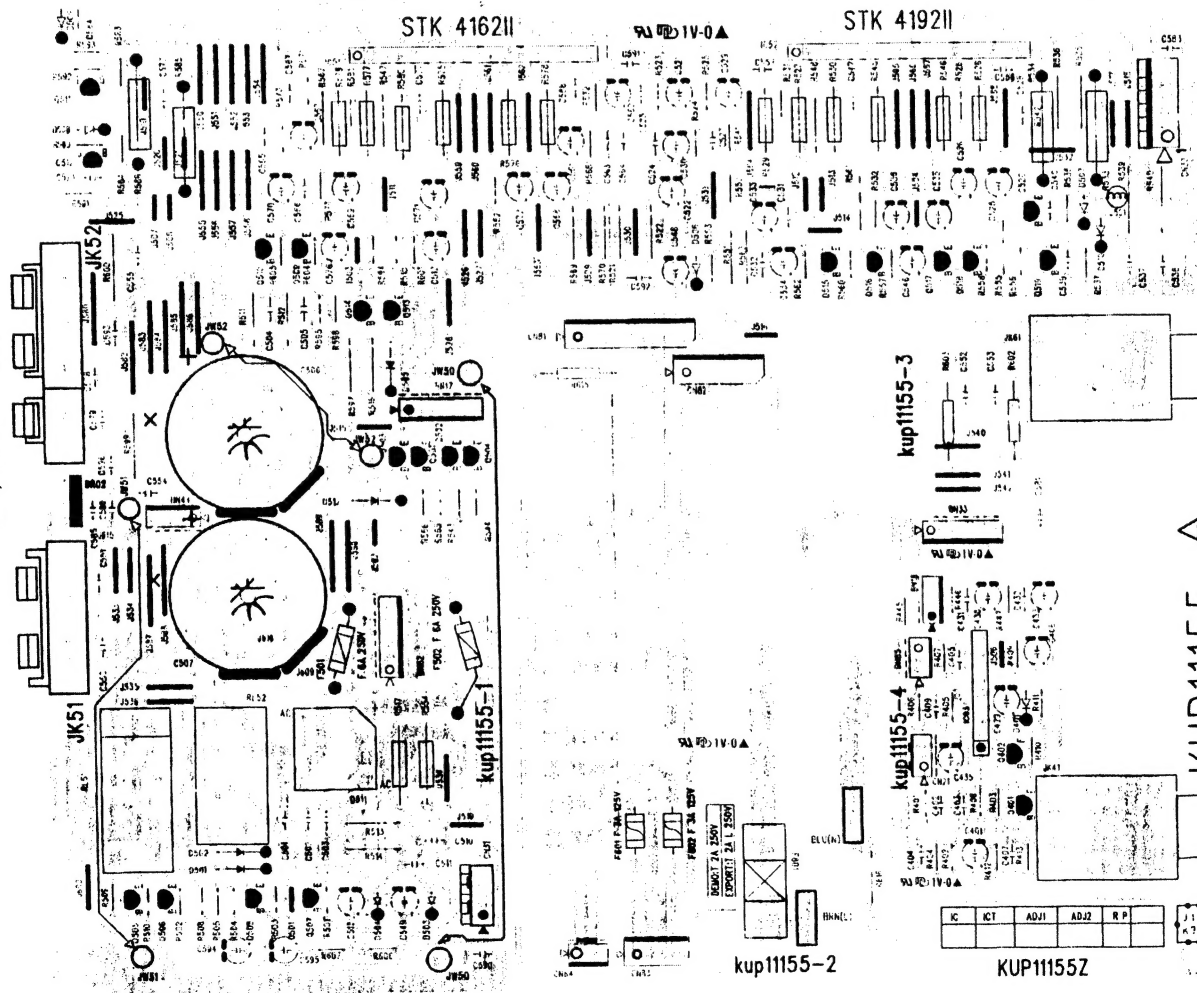
DIP



IC	IC1	ADJ1	ADJ2	RP
----	-----	------	------	----

DIP

JK51/JK52 IS UPSIDE "BLACK COLOR"



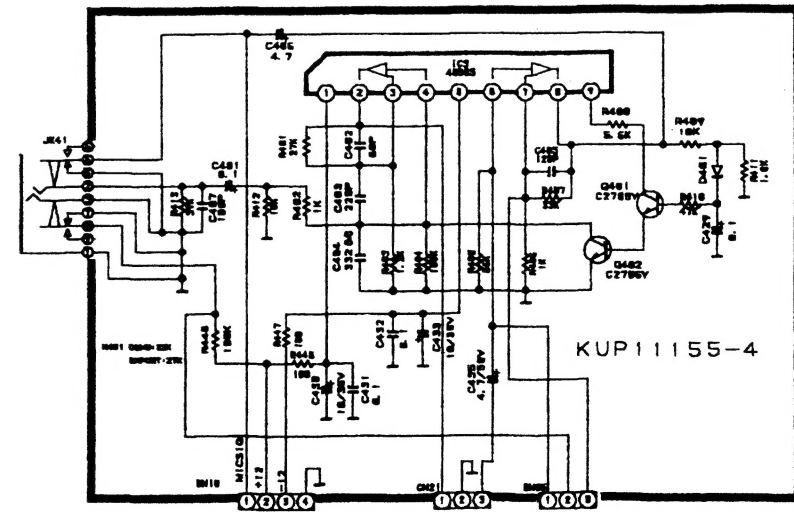
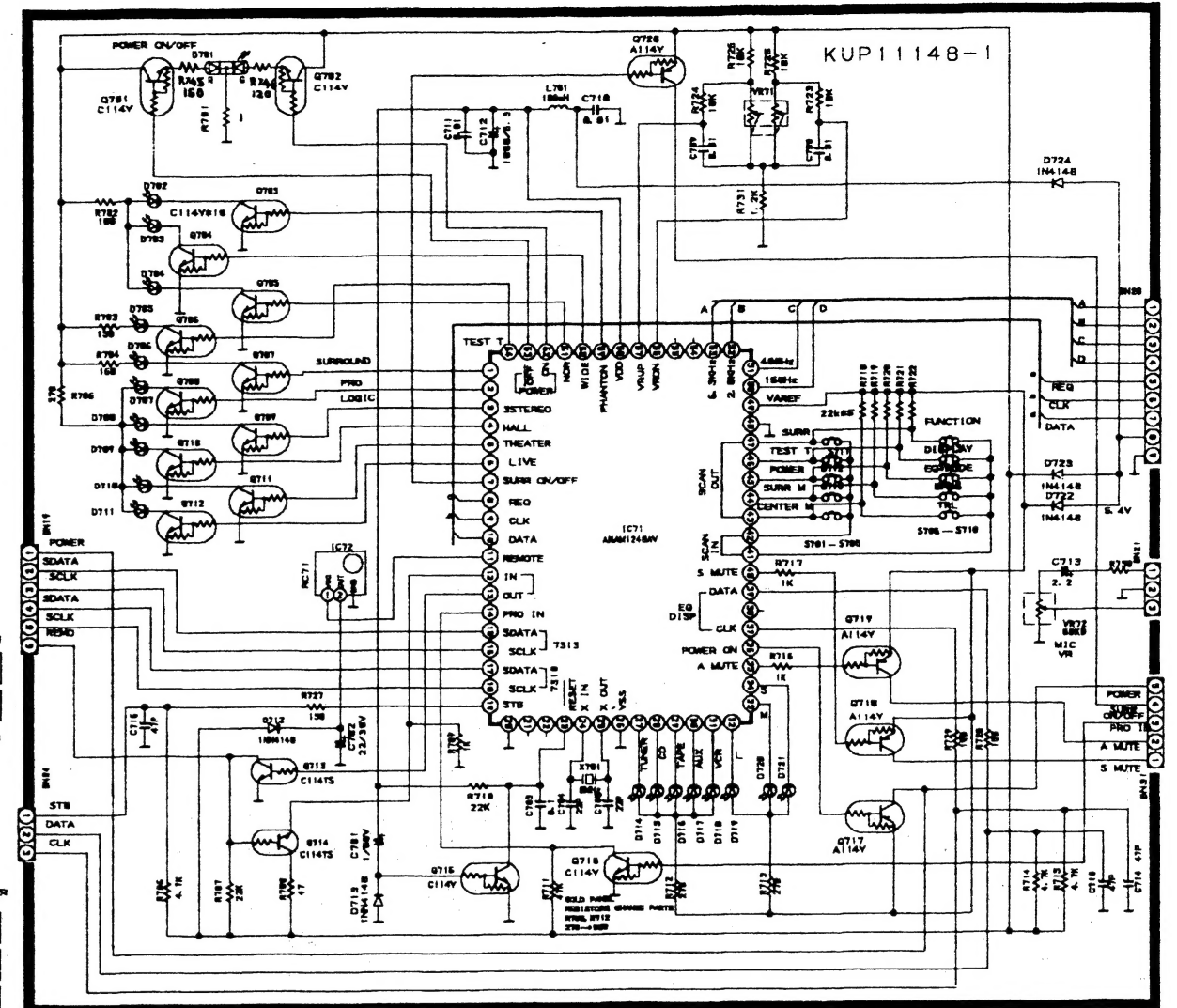
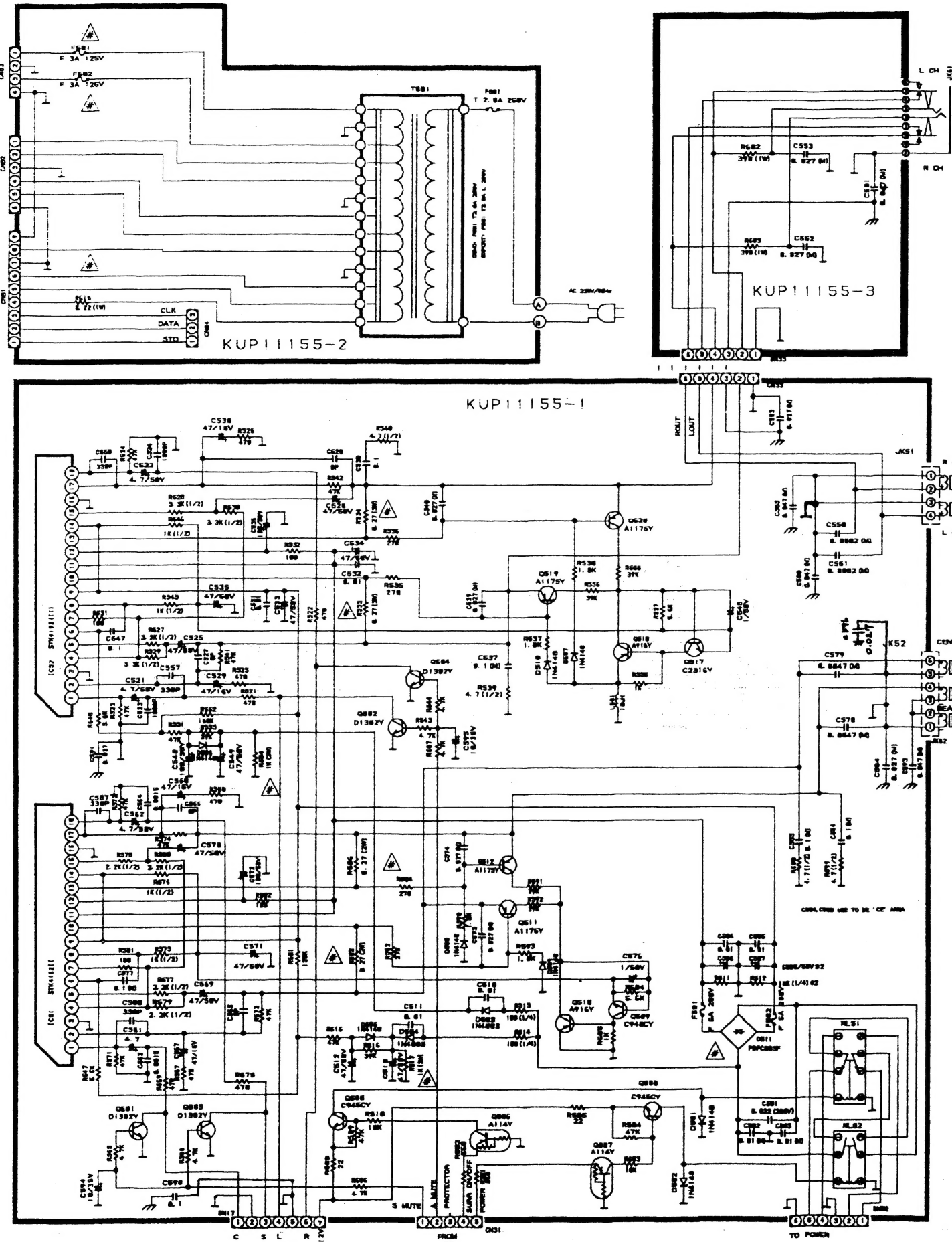
IC	IC1	ADJ1	ADJ2	RP
----	-----	------	------	----

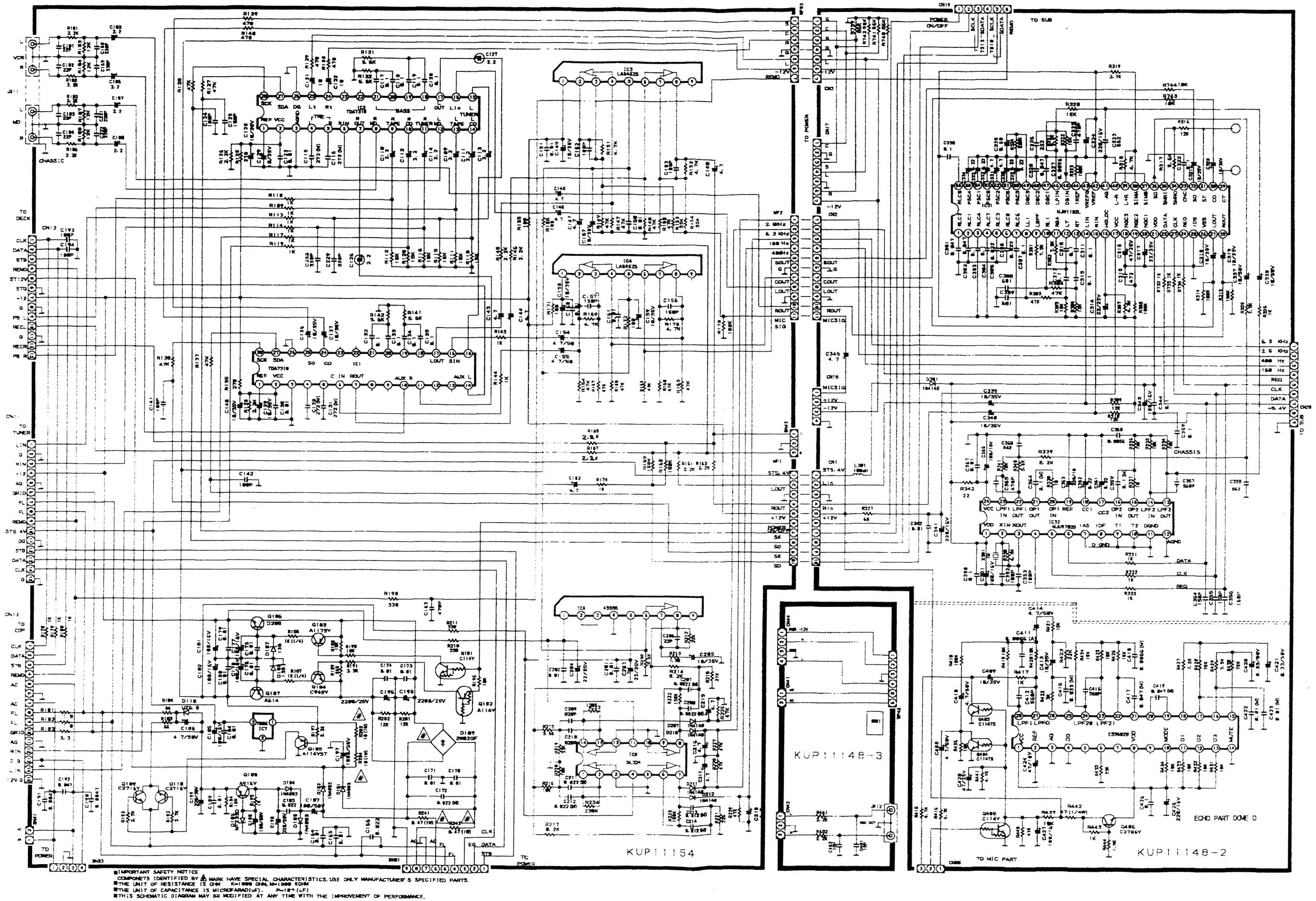
KUP11155Z

KUP11155



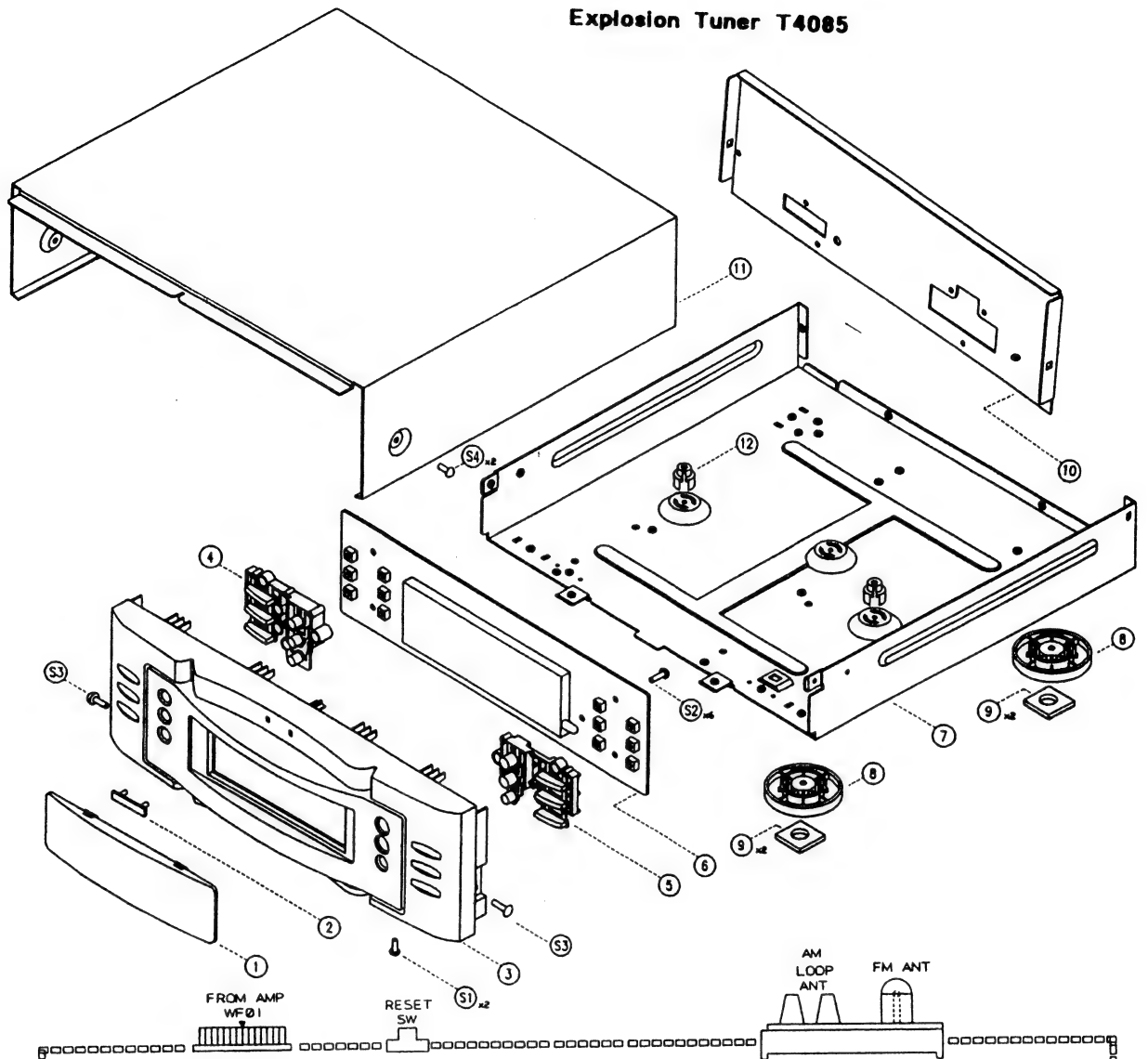
## SCHEMATIC DIAGRAM Verstärker V4085



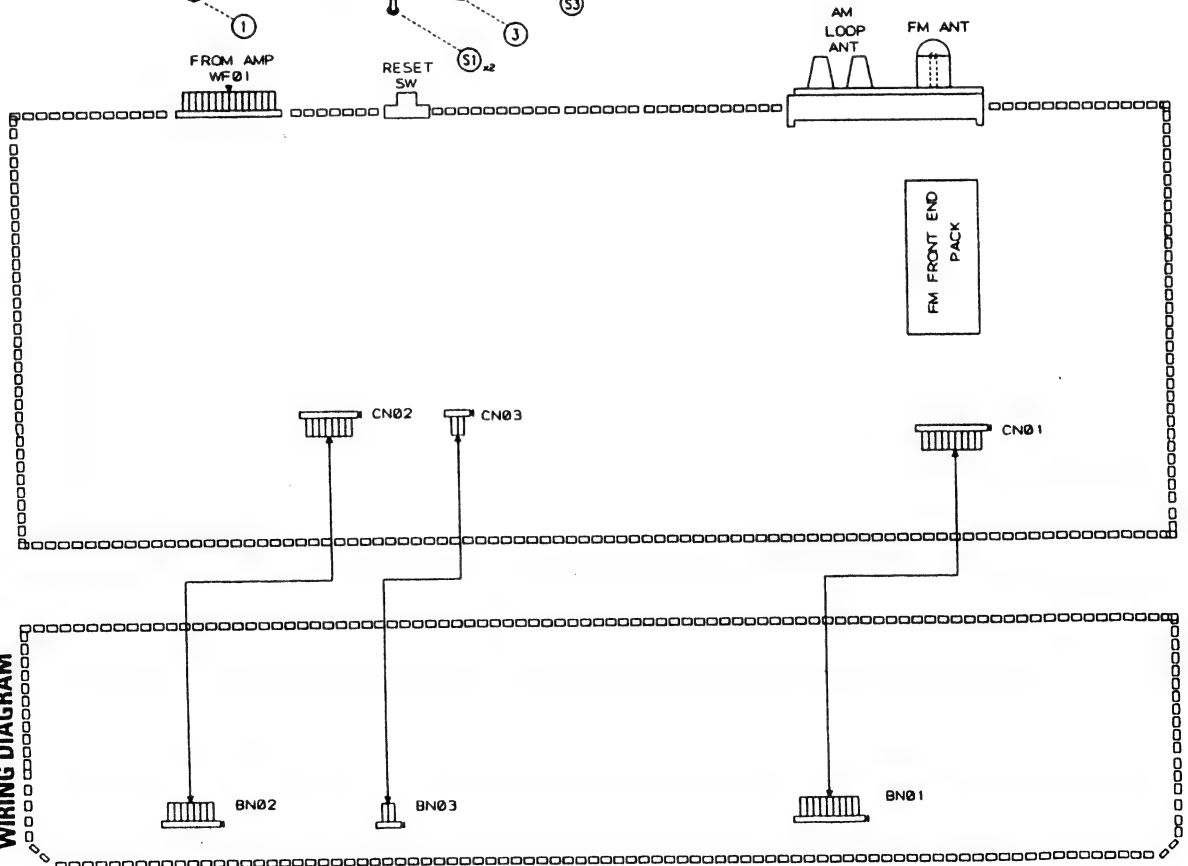




# Explosion Tuner T4085

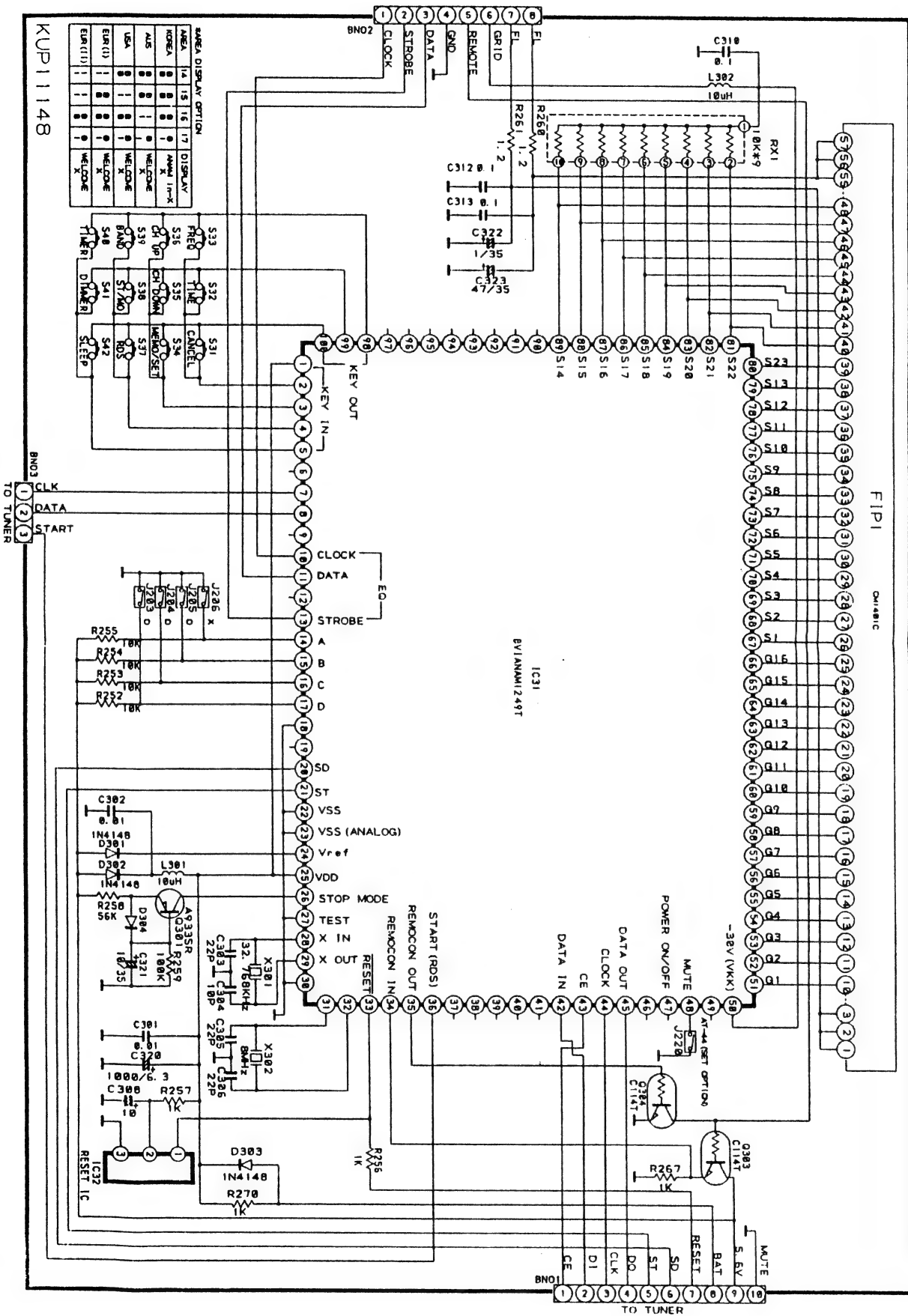


## WIRING DIAGRAM



# Bedienplatine Tuner T4085

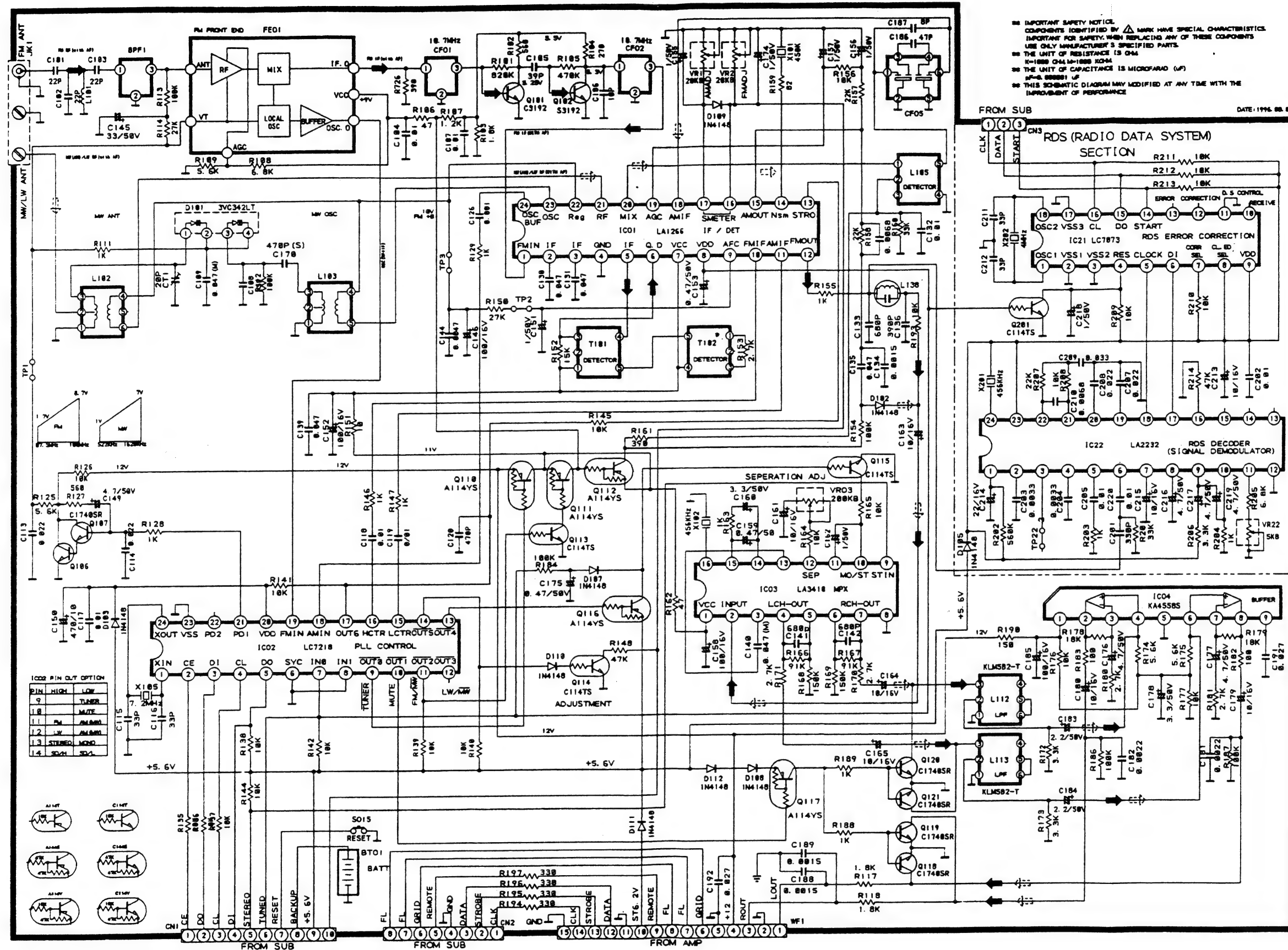
### SUB SCHEMATIC DIAGRAM



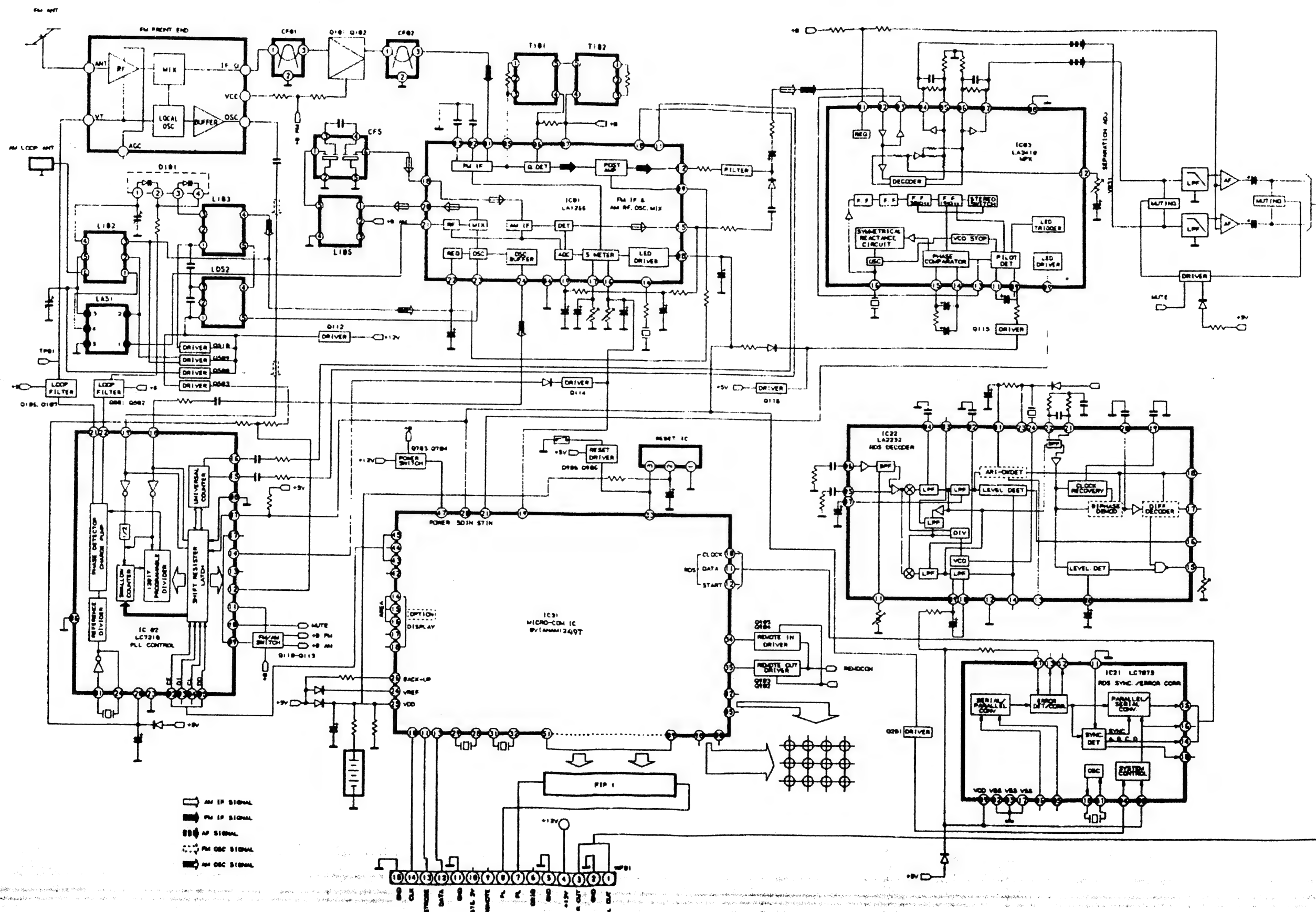
# SCHEMATIC DIAGRAM

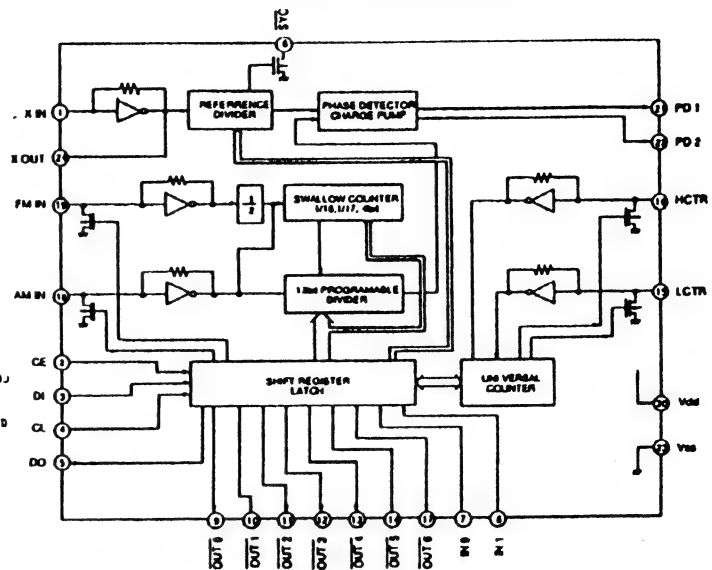
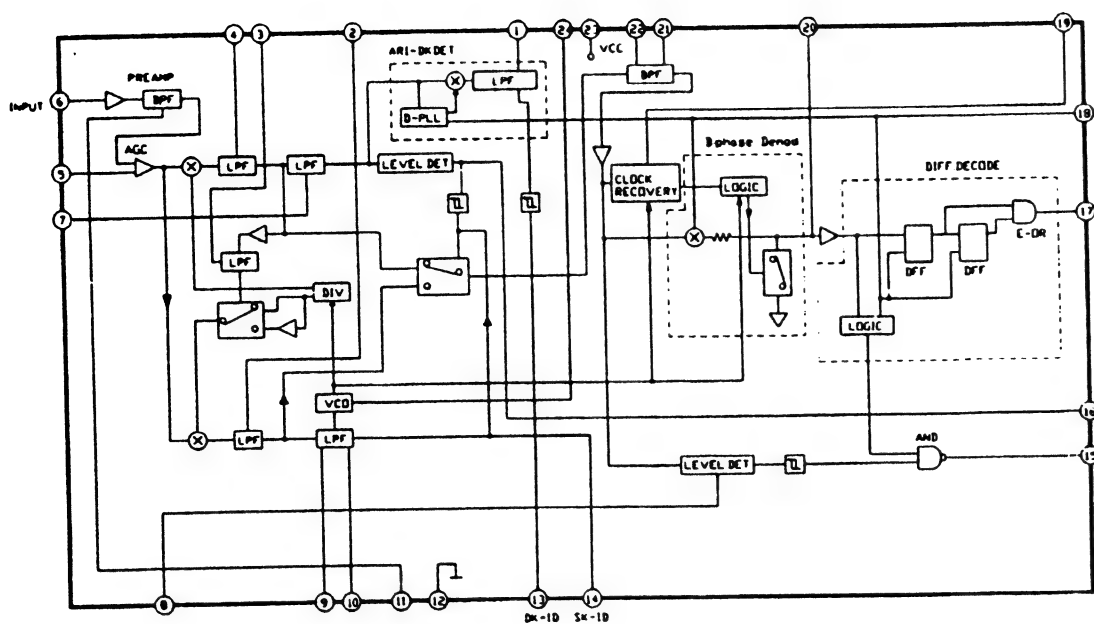
Platine Tuner T4085

## MAIN SCHEMATIC DIAGRAM

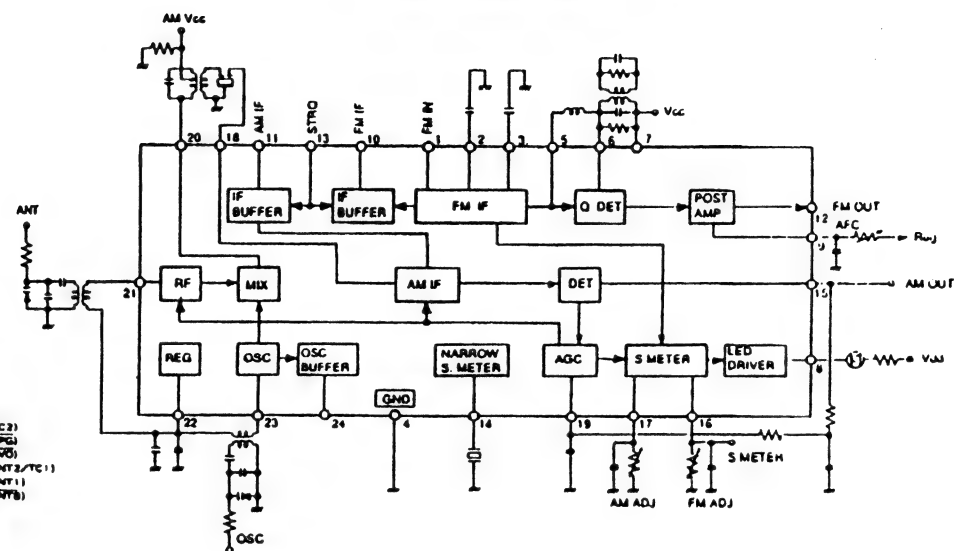


## Tuner T4085

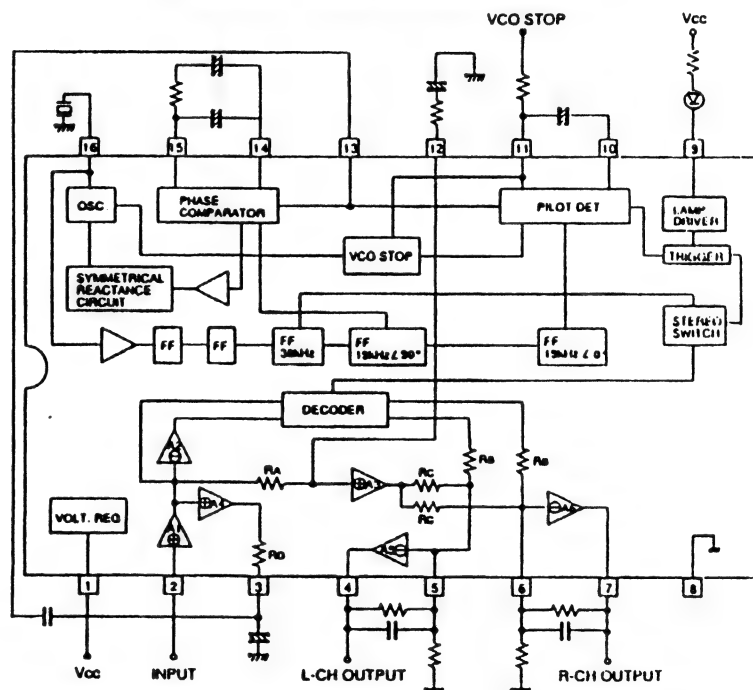




- LA1266 (AM/FM IF AMP)



• LA3410A (PLL FM MPX DEMODULATOR)



## ■ RESISTORS AND CAPACITORS

**Notes :** • Part numbers are indicated for most mechanical parts.  
Please use this part number for parts order.

- **IMPORTANT SAFETY NOTICE.**  
Components identified by a mark have special characteristics important for safety.  
When replacing any of these components, use only manufacture's specified parts.
- The unit of resistance is OHM(K),  
K=1000(K), M=1000(K)
- The unit of capacitance is MICROFARAD( $\mu$ F)  
P=10<sup>-12</sup>F

### ■ Numbering System of Resistor

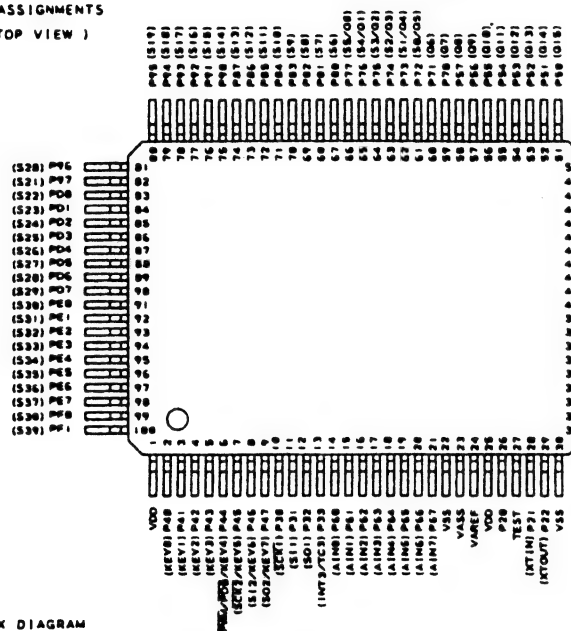
Example				
KRD	25	F	J	101
Type	Wattage	Shape	Tolerance	Value
KRD: Carbon	20:1/5W	F: $\pm 1\%$		
KRG: Metal Oxide	25:1/4W	J: $\pm 5\%$		
	50:1/2W	K: $\pm 10\%$		
	1:1W			
KRF: Metal Cement	2:2W			
	3:3W			

### ■ Numbering System of Capacitor

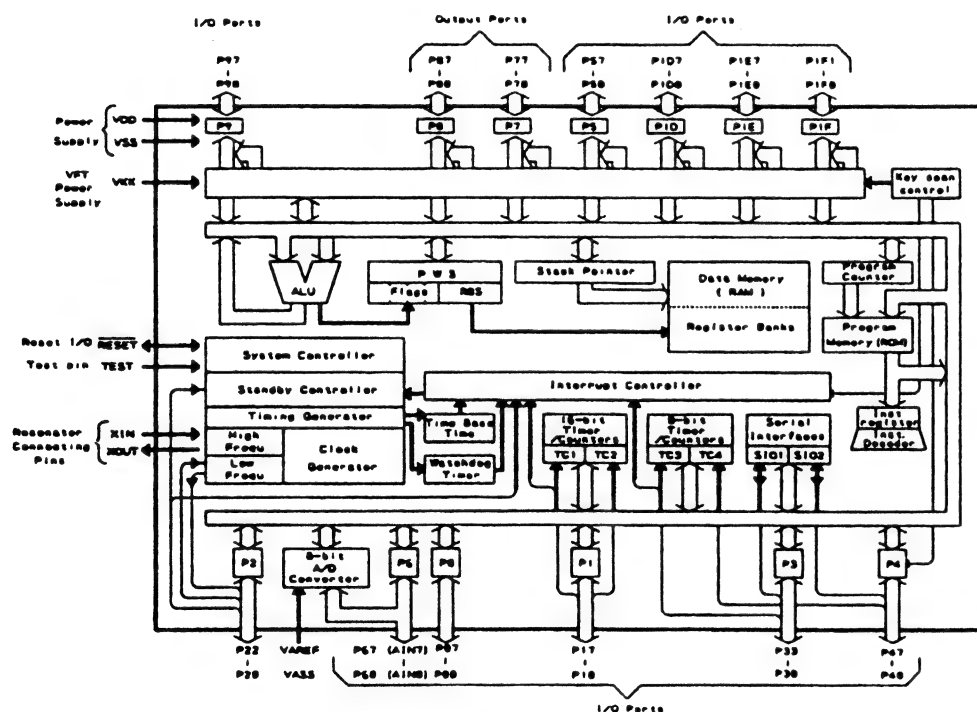
Example				
KCKR	1H	101	K	B
Type	Voltage	Value	Tolerance	Peculiarity
Capacitor Type	Voltage			
	ECEA Type	Other		
KCB: Ceramic	0.1-3V	1H:50V DC		C G J K Z
KCC: Ceramic	1A:10V	1:125V DC		
KCK: Ceramic	1C:15V	KC:400V AC		
KCO: Polyester	1E:25V			
KCP: Polypropylene	1H:50V			
KCS: Polystyrol	1V:35V			

## [ U-COM FUNCTION BVIANAMI249T

PIN ASSIGNMENTS  
( TOP VIEW )



**BLOCK DIAGRAM**



### ATTENTION

1. When placing an order for parts, be sure to list the Part No., Model No, and the description of each part. Otherwise, the non-delivery of the part or the delivery of a wrong part may result.
2. Please make sure that Part No. is correct when ordering.  
If not, a part different from the one you ordered may be delivered.
3. Since the parts shown in Parts List of Preliminary Service Manual may have been the subject of changes, please use this Parts List for all future reference.

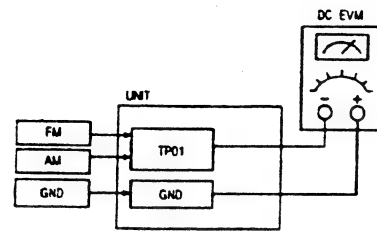
## HOW TO USE THIS PARTS LIST

- 1 This Parts List lists those parts which are considered necessary for repairs. Other common parts, such as resistors and capacitors, are listed in the "Common List Service Parts" from which these parts should be selected and stocked.
- 2 Parts not shown in the Parts List and "Common List for Service Parts" will not in principle be supplied
- 3 How to repair the Parts List.



## 1.TUNING FREQUENCY RANGE ADJUSTMENTS

(FM) DC VOLTMETER ..... CONNECT TO TEST POINT TP1 and GND  
(AM) DC VOLTMETER ..... CONNECT TO TEST POINT TP1 and GND

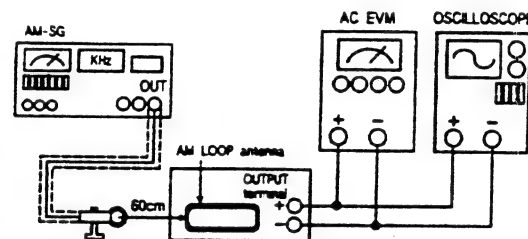


NO.	Band	Frequency	Adjust for	Adjustment
1	FM	87.50MHz	1.5V	L4
2	AM	522KHz	1V	L103

## 2.AM TRACKING ADJUSTMENT

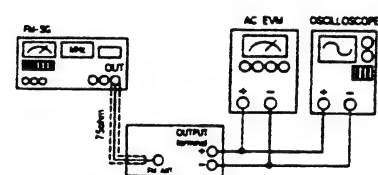
Signal Generator ..... Connects to the AM ANT. Coil through the loop antenna.  
Adjust for the indication of VTVM of the wave form of scope to be maximum.

BAND	Step	Frequency	Adjust for	Adjustment
AM	1	612KHz	Maximum sensitivity	L102
	2	1503KHz	Maximum sensitivity	CT01
	3	Repeat steps 1 and 2 several times.		



### 3.FM-RF ADJUSTMENT

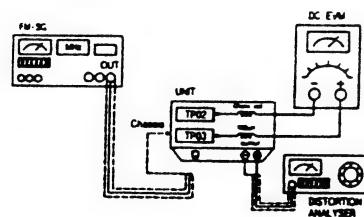
Signal Generator..... Connect to FM ANT JACK (FM IN) through the dummy.



NO.	Frequency	Adjust for	Adjustment
1	90.10MHz	Maximum Sensitivity	L1, L2, L3
2	Repeat step 1 several times.		

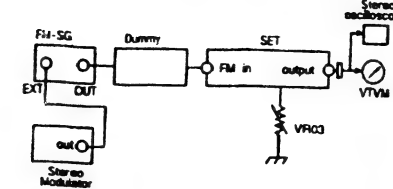
#### 4. FM MONO DISTORTION ADJUSTMENT

DC VOLTMETER .....Connect to TP02(-), TP03(+)  
Signal Generator .....Connect to FM ANT Jack (FM IN) through the dummy.  
Distortion Meter .....Connect to the output.



NO.	Frequency	Adjust for	Adjustment
1	100.10MHz	DC Voltmeter 0V	T101
2	100.10MHz	Minimum T.H.D	T102
3	Repeat steps 1 and 2 several times.		

## 5. FM STEREO SEPARATION



Pilot signal	Adjust for	Adjustment
ON	Different of R and L must be maximum	VR03

**NOTE :** In case of adjusting the stereo separation, if input is L (or R) channel, R (or L) channel must be maximum.

## ■ ALIGNMENT INSTRUCTIONS

**EQUIPMENT NEEDED:**

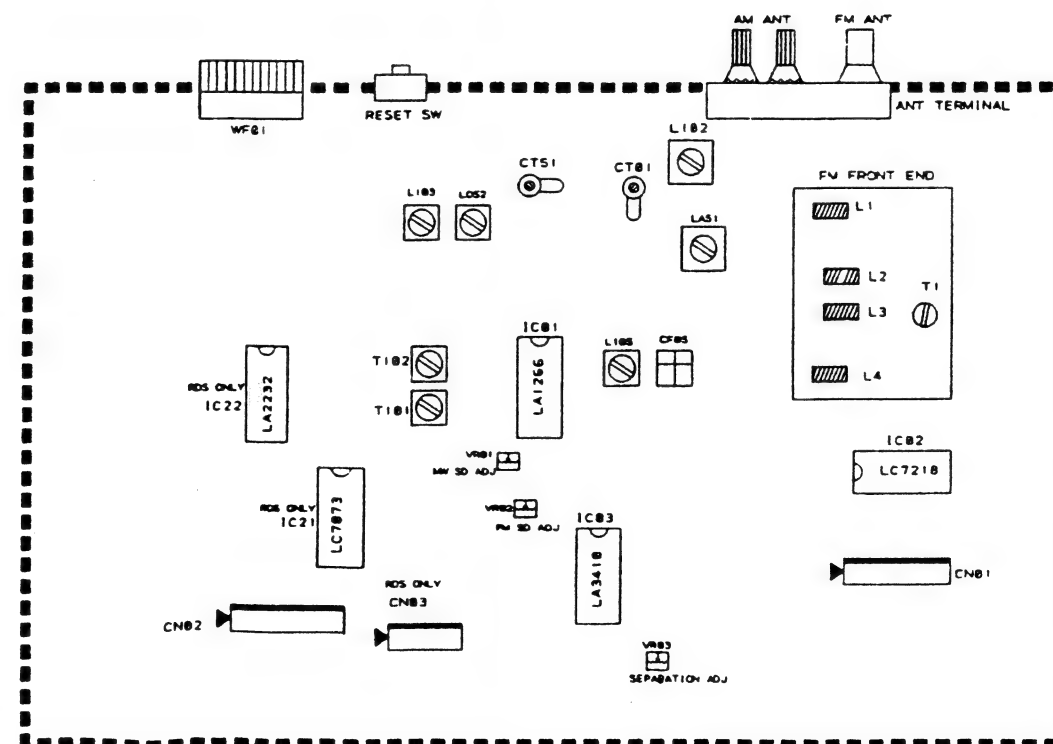
AM Signal Generator  
 FM Signal Generator  
 Oscilloscope  
 VTVM(AC, DC)  
 Test loop antenna (MW Adjustment)  
 Dummy antenna (FM Adjustment)  
 Stereo signal modulator  
 Distortion analyser

**IMPORTANT**

1. Check power-source voltage.
2. Set the function switch to band aligned.
3. Keep the signal input as low as possible to adjust accurately.
4. Modulation and modulation frequency.

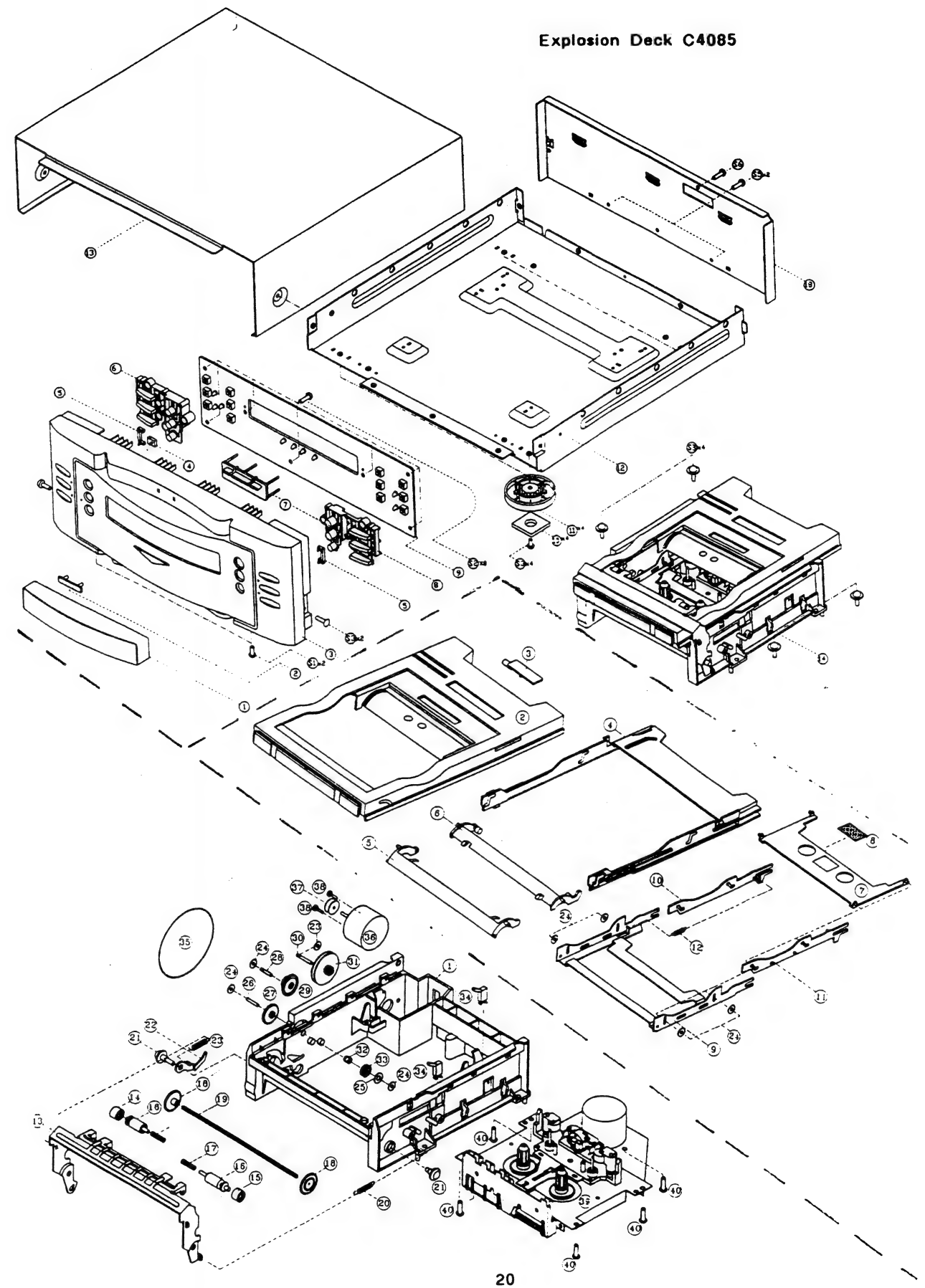
Band \ Item	Modulation	Modulation frequency
AM	30%	400Hz
FM	100%(75KHz Dev.)	400Hz

### ■ ADJUSTMENT POINT



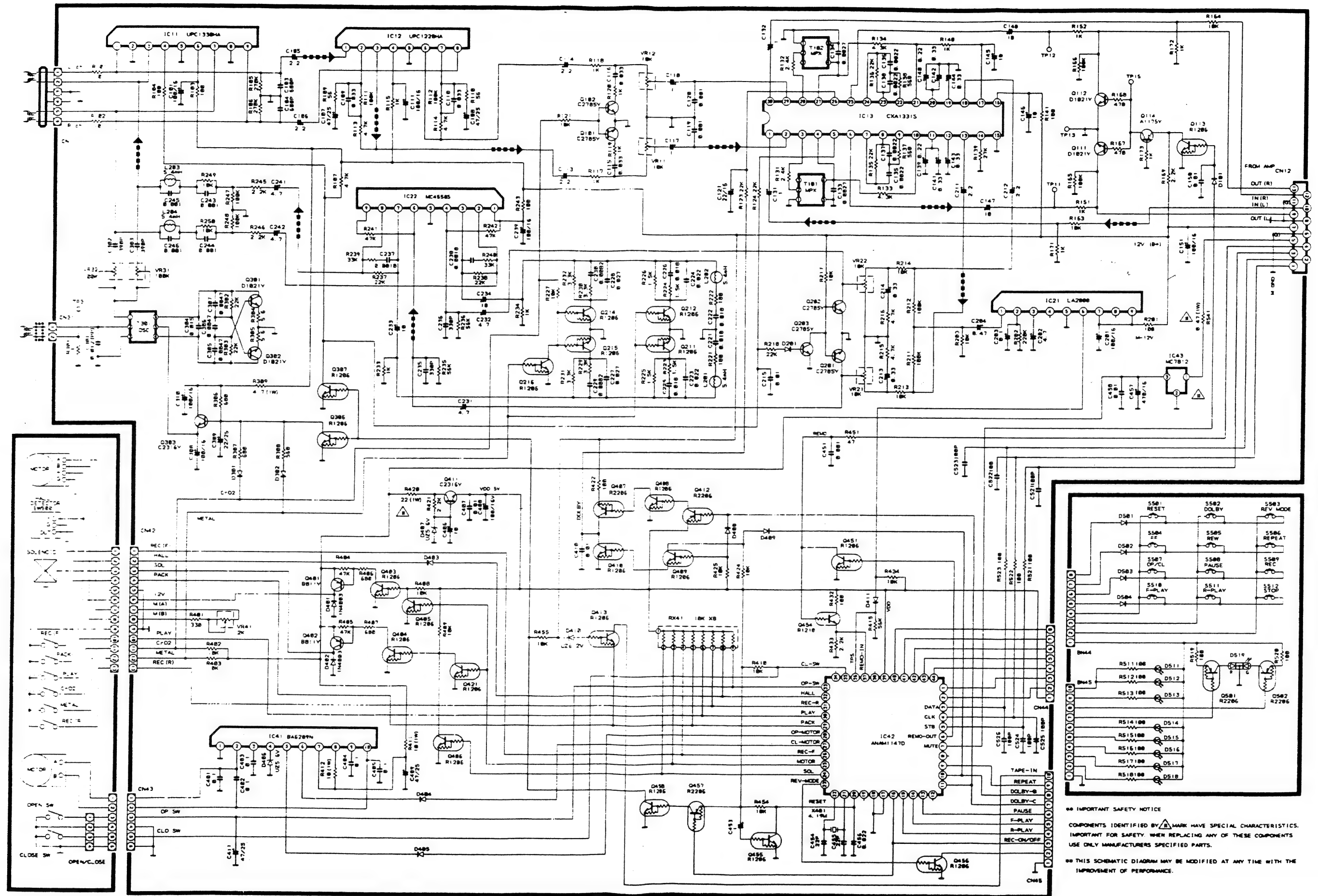


Explosion Deck C4085



# SCHEMATIC DIAGRAM

Cassettendeck C4085

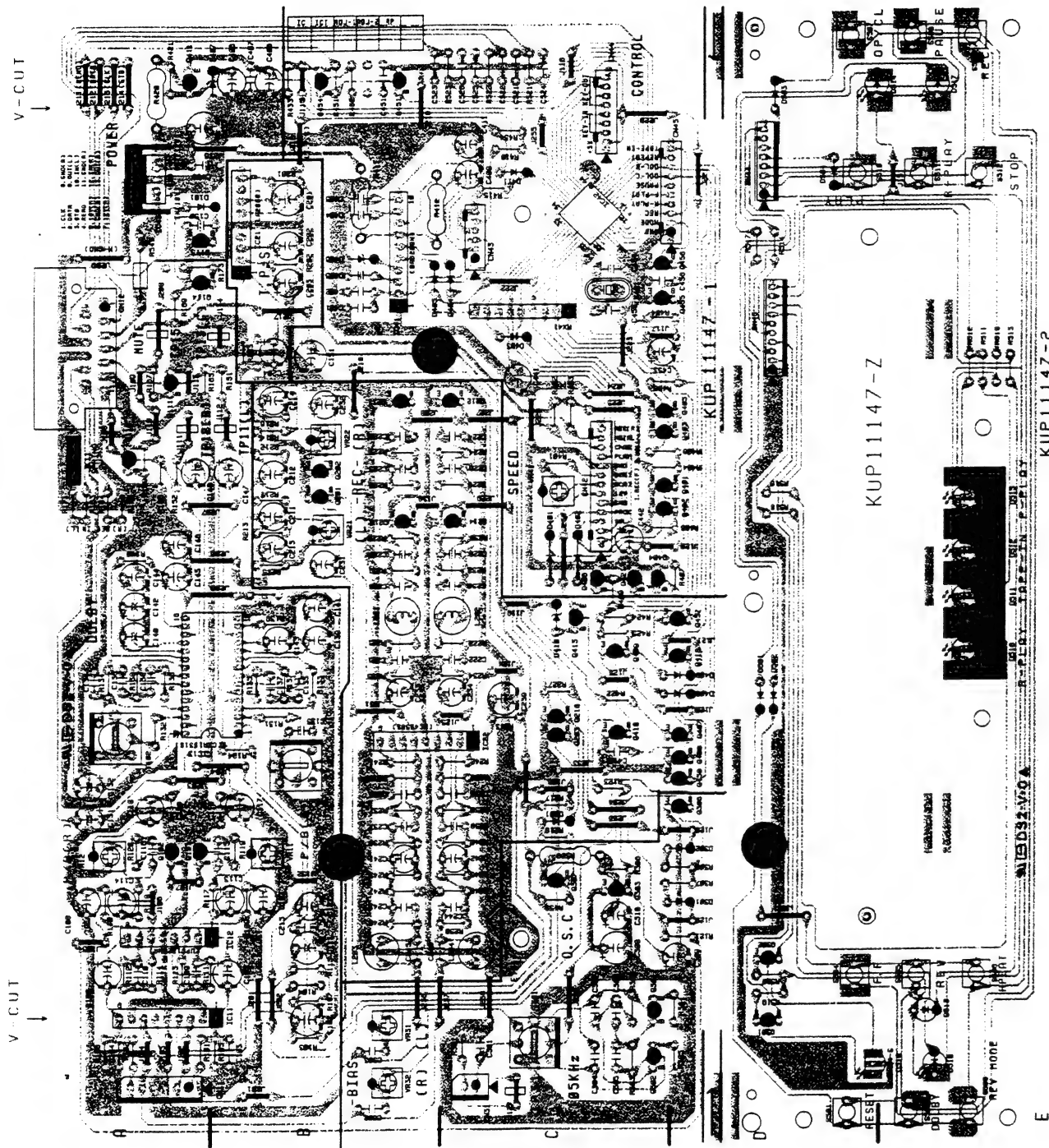


**IMPORTANT SAFETY NOTICE**

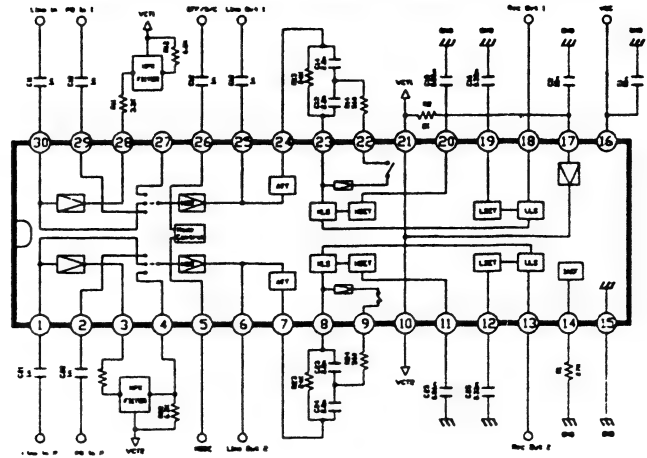
COMPONENTS IDENTIFIED BY MARK HAVE SPECIAL CHARACTERISTICS. IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS USE ONLY MANUFACTURERS SPECIFIED PARTS.

**THIS SCHEMATIC DIAGRAM MAY BE MODIFIED AT ANY TIME WITH THE IMPROVEMENT OF PERFORMANCE.**

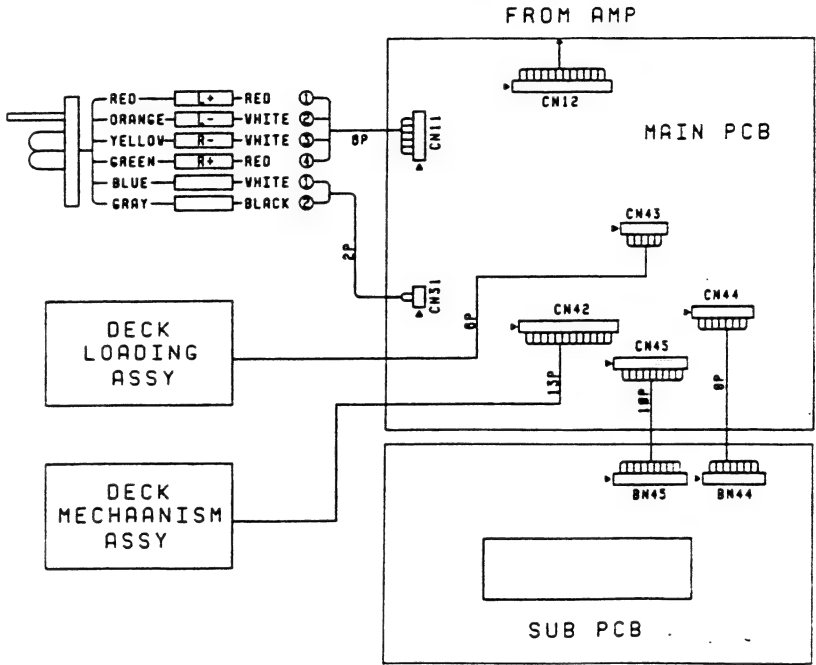
PRINTED CIRCUIT BOARDS



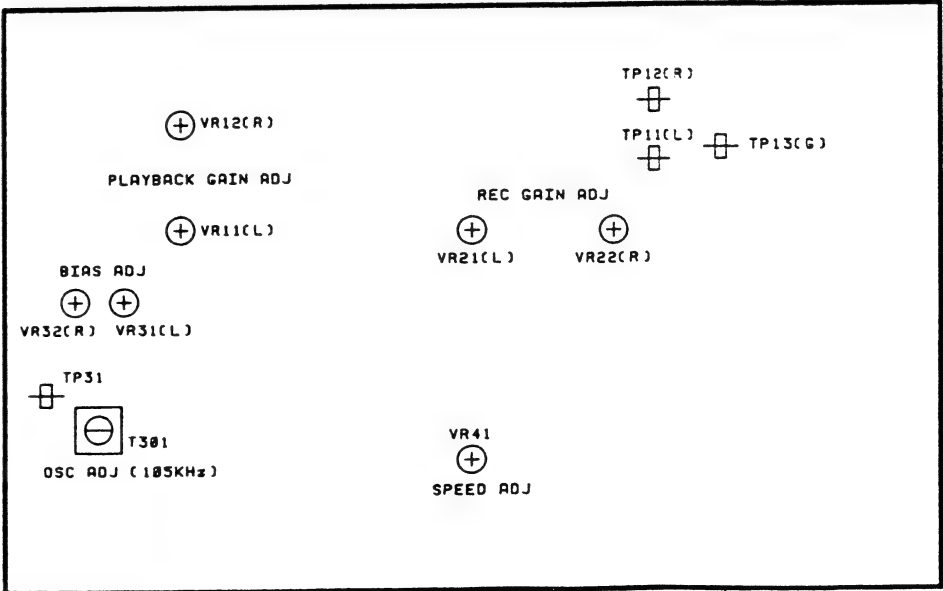
CXA1331S (DOLBY B, C Noise Reduction System)



DECK WIRING DIAGRAM



DECK ADJUSTMENT POINT



## MEASUREMENT AND ADJUSTMENT METHODS

### Measurement condition

- Dolby NR position: OFF
- Make sure heads are clean
- Make sure capstan and pressure roller are clean.

### MEASURING INSTRUMENTS

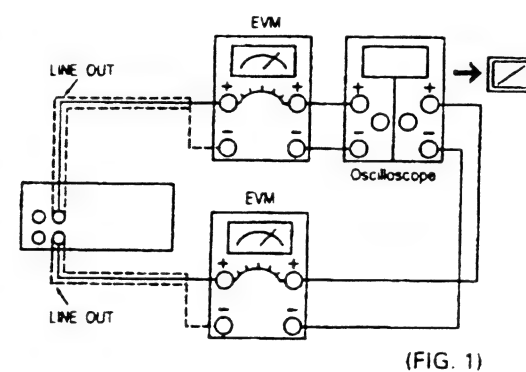
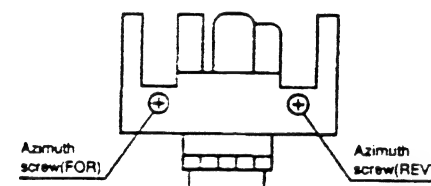
- EVM(Electronic Voltmeter)
- Oscilloscope
- Frequency counter
- AF Oscillator
- DC Voltmeter
- ATT(Attenuator)
- Resistor (600Ω)

### Test tape

- Head azimuth (10KHz, -10dB): MTT-114N
- Tape speed(3KHz, -10dB): MTT-111N
- Playback frequency response (125Hz, 1KHz, 10KHz, -10dB)
- Playback gain: MTT-150
- Blank tape
  - Normal blank tape: STT-5513
  - CrO<sub>2</sub> blank tape: STT-5563
  - Metal blank tape: STT-5573

### HEAD AZIMUTH ADJUSTMENT

1. Test equipment connections are shown in fig. 1.
2. Playback the head Azimuth test tape and regulate the angle adjust screw so that the outputs of L-ch and R-ch are maximized. (When the adjusting positions are different with L-ch and R-ch, find a position where the outputs of L-ch and R-ch are balanced and then make the adjustment.)
3. At the same time, obtain a lissajous waveform and eliminate phase deflection.
4. After the adjustment, apply screw lock to the angle adjusting value.

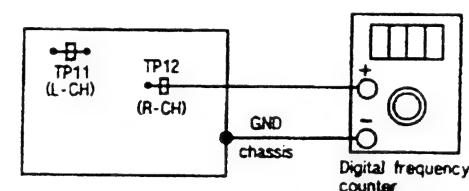


(FIG. 1)

### TAPE SPEED ADJUSTMENT

1. Test equipment connections are shown in fig. 2.
2. Playback the middle part of the test tape.

Adjustment point	VR41
Standard Value	3,000Hz ±30Hz

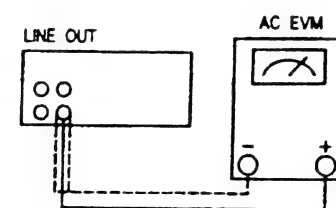


(FIG. 2)

### PLAYBACK GAIN ADJUSTMENT

1. Test equipment connections are shown in fig. 3.
2. Playback the playback gain test tape. (MTT-150).
3. Adjust playback gain.

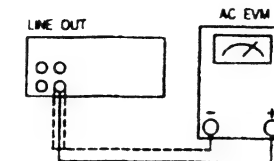
Adjustment Point	L ch : VR11	R ch : VR12
Standard Value	548mV	



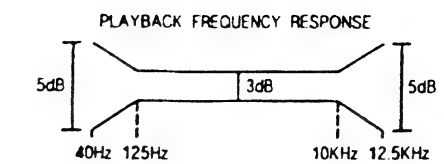
(FIG. 3)

### PLAYBACK FREQUENCY RESPONSE

1. Test equipment connections are shown in fig. 4.
2. Playback the playback frequency response test tape.
3. Check that the frequency response is within the range shown in Fig. 5 for both L-ch and R-ch.



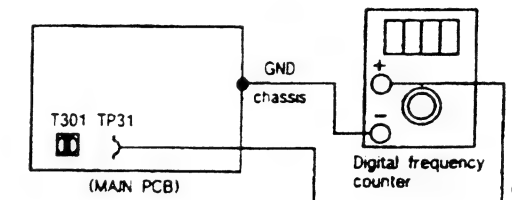
(FIG. 4)



(FIG. 5)

### BIAS FREQUENCY ADJUSTMENT

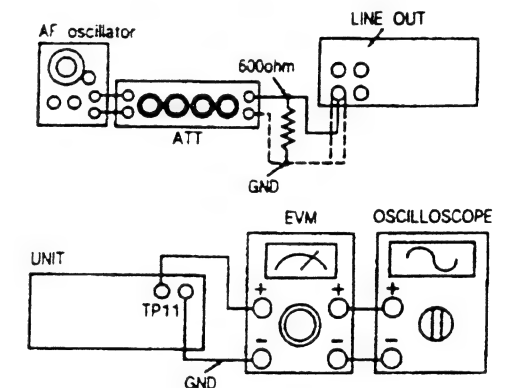
1. Test equipment connections are shown in fig. 6.
2. Load a CrO<sub>2</sub> blank test tape.
3. Press the record and pause button.
4. Adjust T301 for 105KHz frequency counter reading.



(FIG. 6)

### OVERALL GAIN ADJUSTMENT

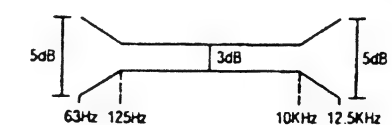
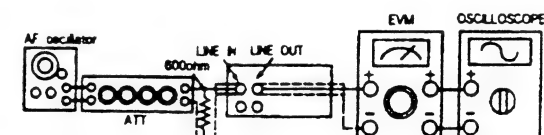
1. Test equipment connections are shown in fig. 7.
2. Insert the normal reference blank tape.
3. Place UNIT into recorder mode.
4. Supply a 1KHz signal through ATT (-10dB) from AF oscillator to line in.
5. Adjust ATT until monitor level at TP11 (L-ch) or TP12 (R-ch) becomes 180mV.
6. Playback recorded tape and make sure that the output level at TP11 (L-ch) or TP12 (R-ch) becomes 180mV.
7. If measured value is not 180mV, adjust it by using VR21 (L-CH) or VR22 (R-CH).
8. Repeat from step (2).



(FIG. 7)

### OVERALL FREQUENCY RESPONSE

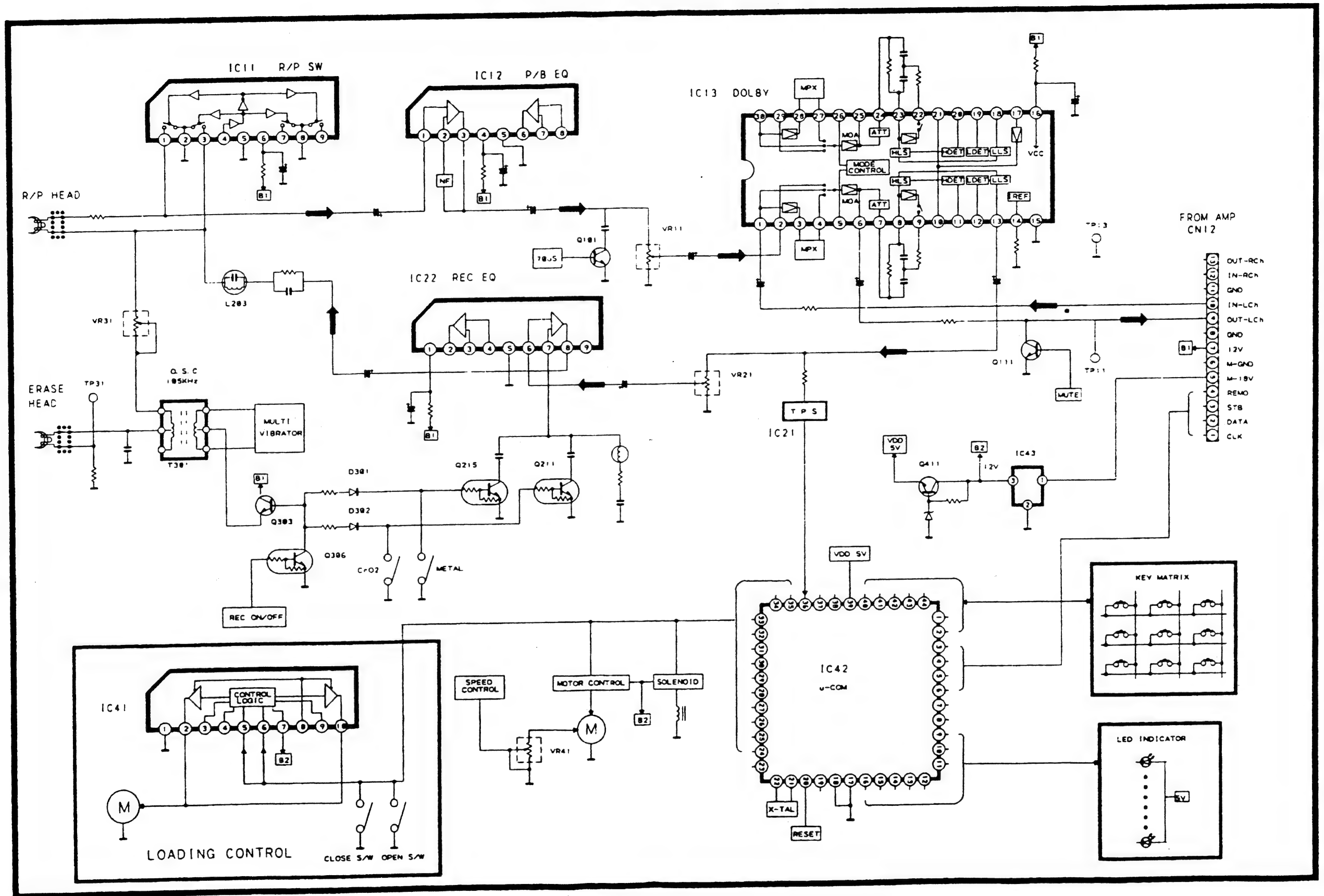
1. Set a normal blank tape (STT-5513) and record by apply signal (100Hz, 1KHz, 10KHz) through ATT-from AF oscillator to line in (Line out Level: 33mV).
2. Playback the signal recorded in step 1, and check that the level of each output frequency in within the range shown in fig. 8 in comparison with the reference frequency (1KHz).
3. If it is not within the standard range adjust the bias current by using VR31 (L-CH) or VR32 (R-CH) so that the frequency level is within the standard.
- Level up in high frequency range...Increase the bias current.
- Level down in high frequency range...Decrease the bias current.
4. After that, increase the signal recorded on CrO<sub>2</sub> blank tape (STT-5563) and metal blank tape (STT-5573) up to 14KHz and adjust in the same way as mentioned above and check that the frequency level is within the range shown in Fig. 8.



(FIG. 8)

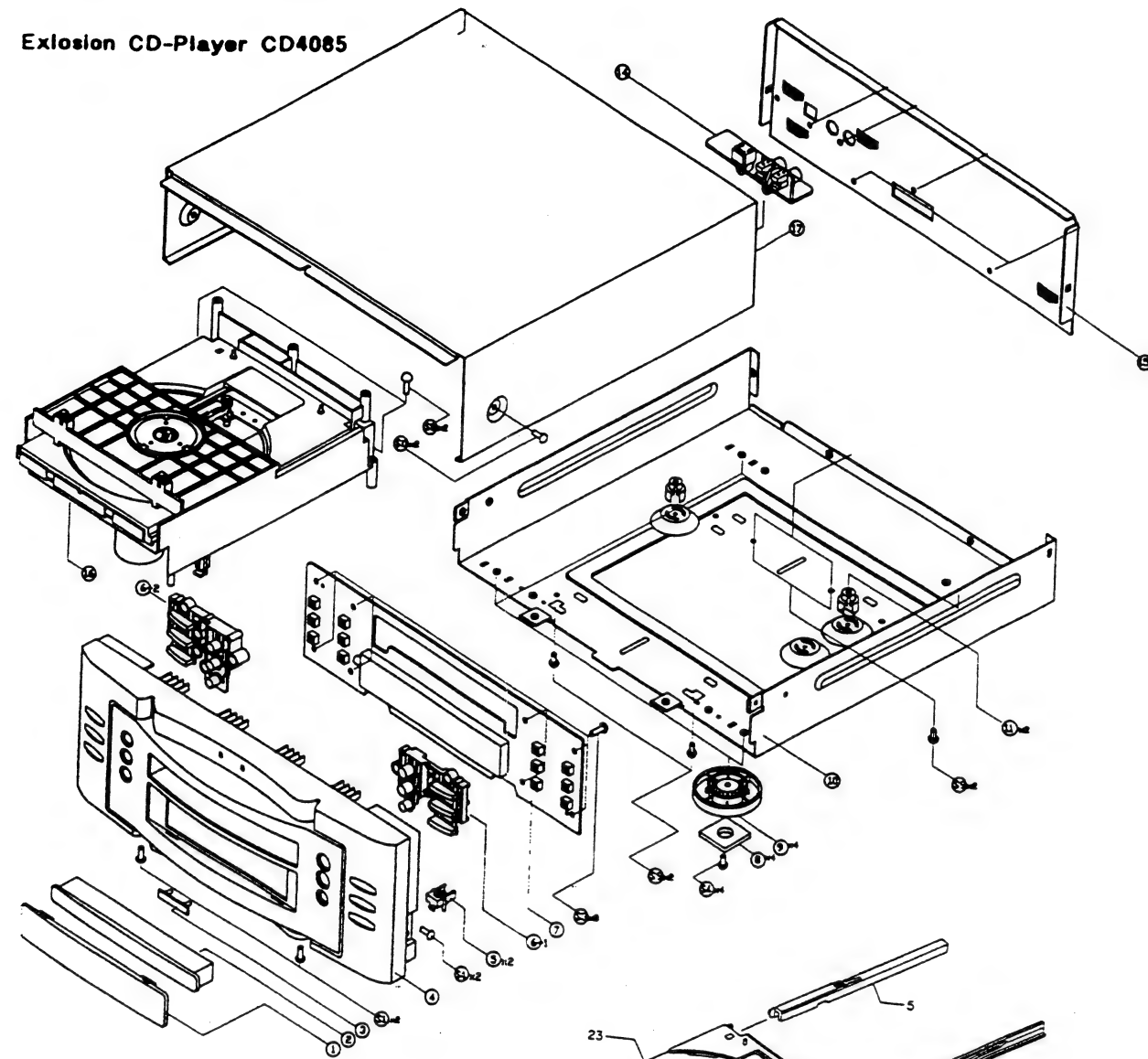
# BLOCK DIAGRAM

## Cassettendeck C4085

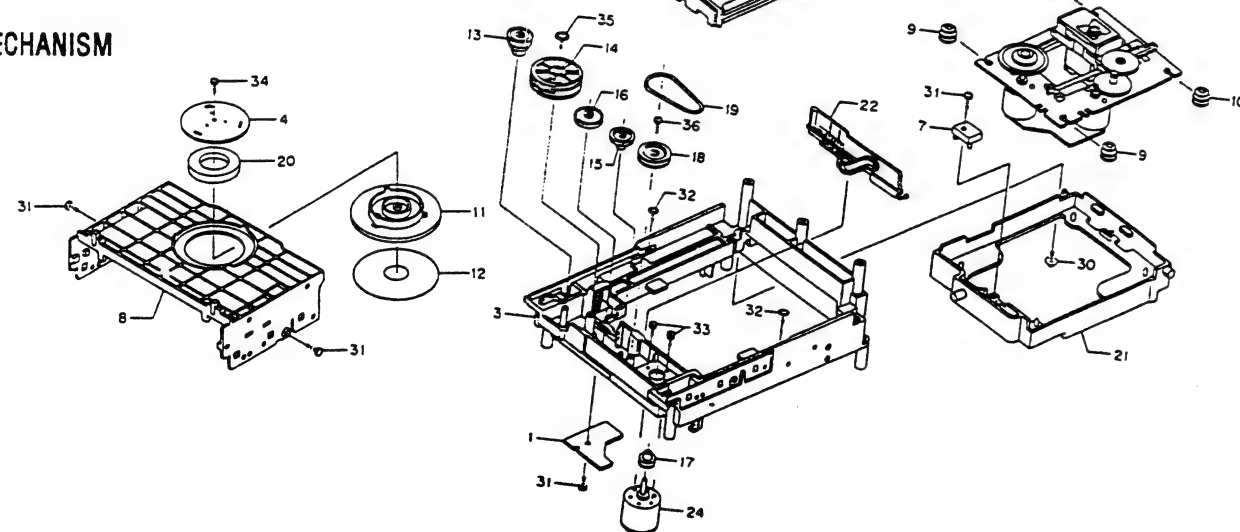




# Explosion CD-Player CD4085

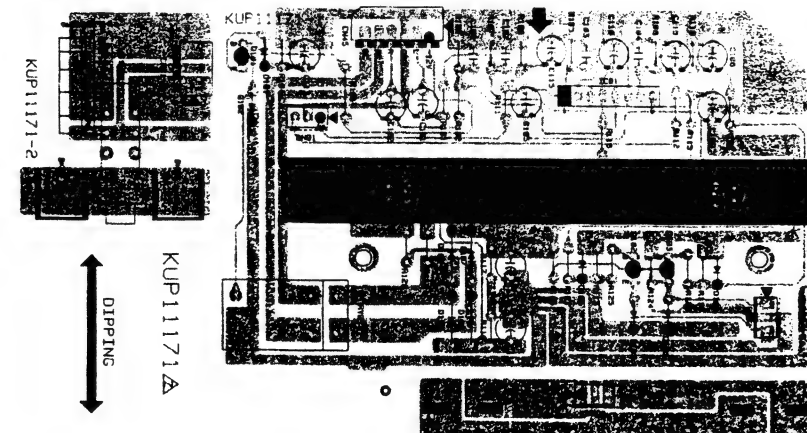
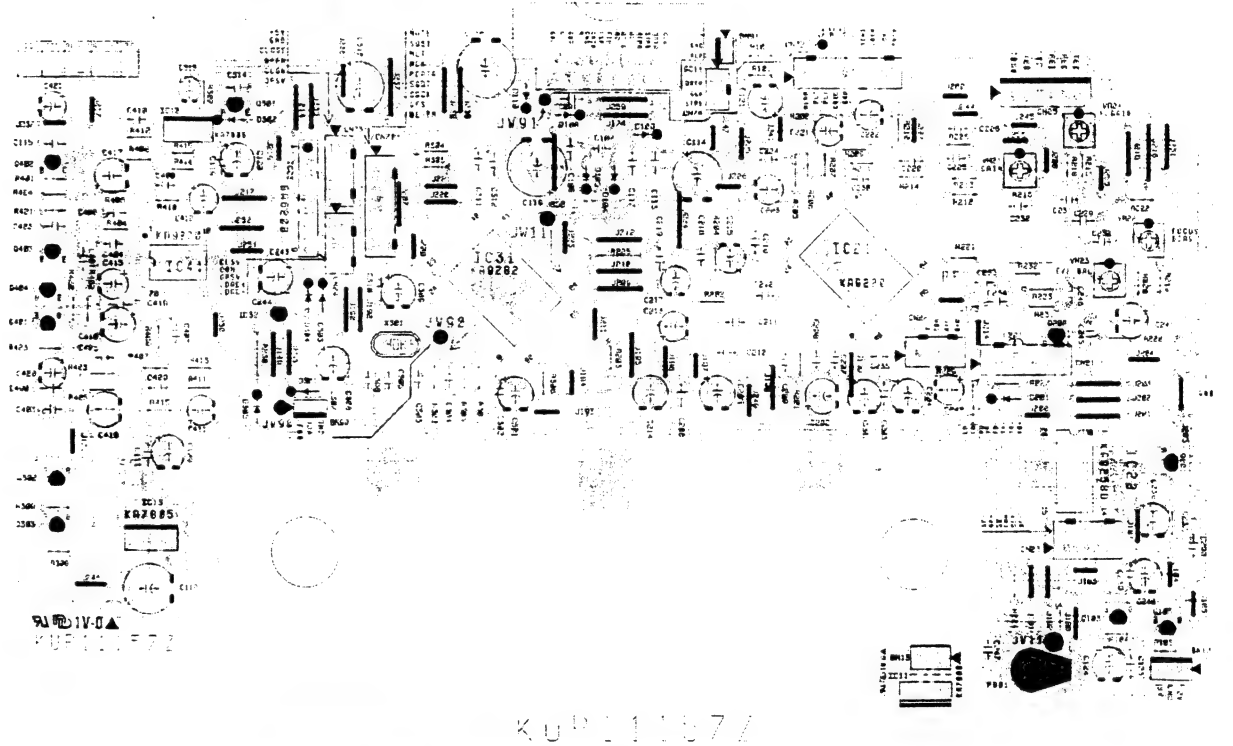
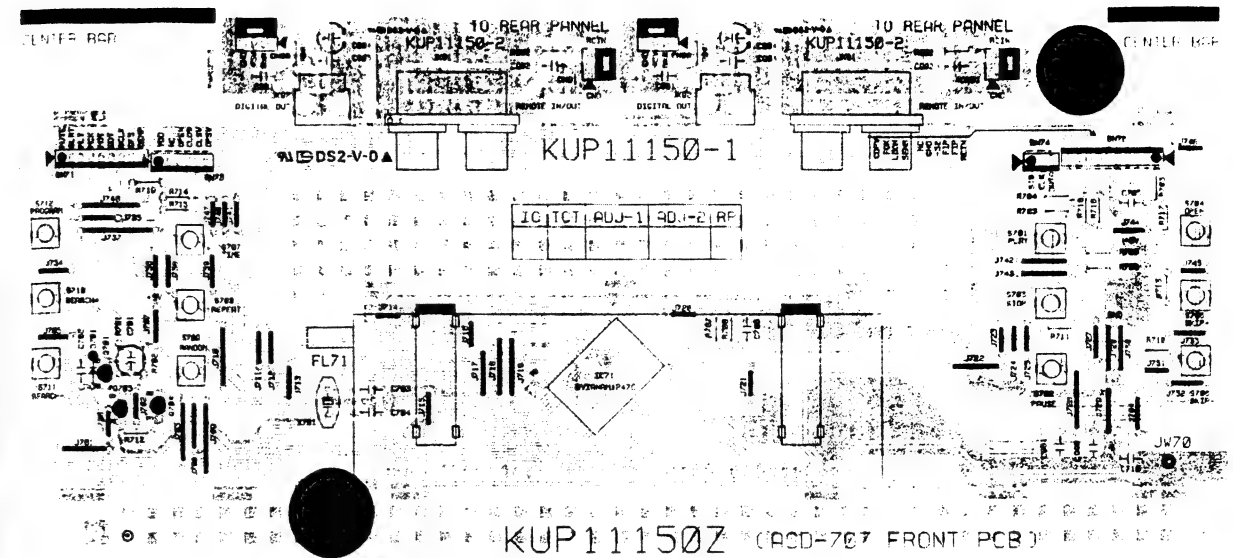


## MECHANISM



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## PRINTED CIRCUIT BOARDS

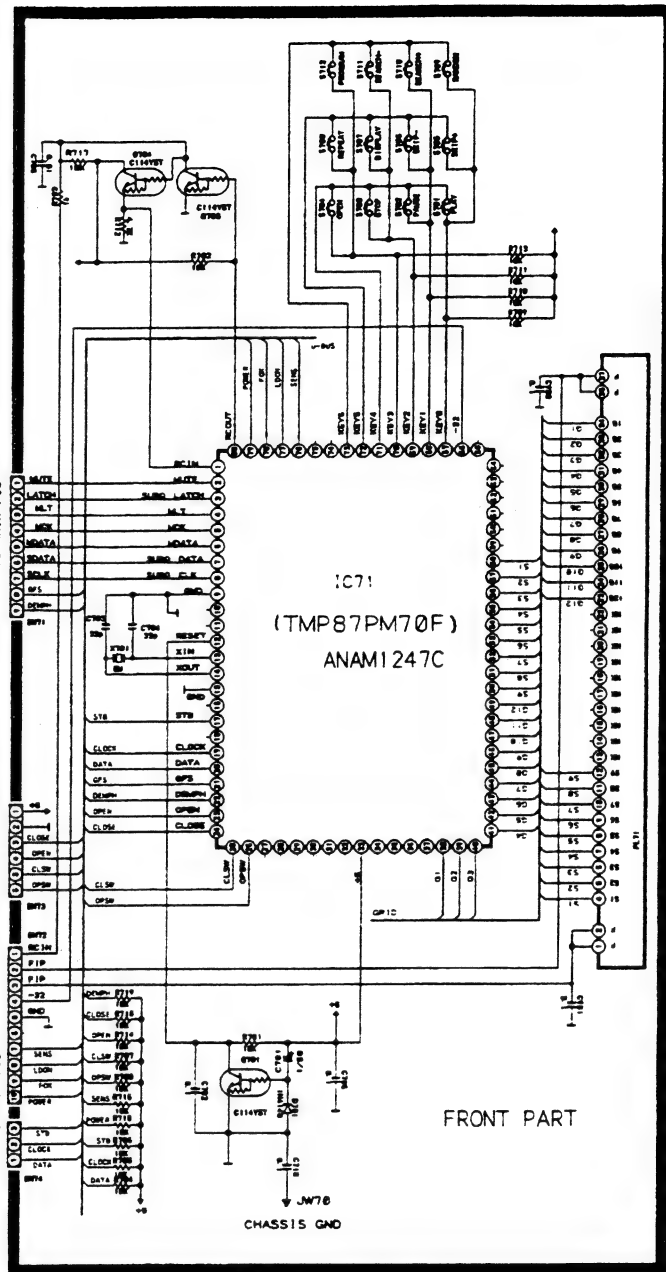
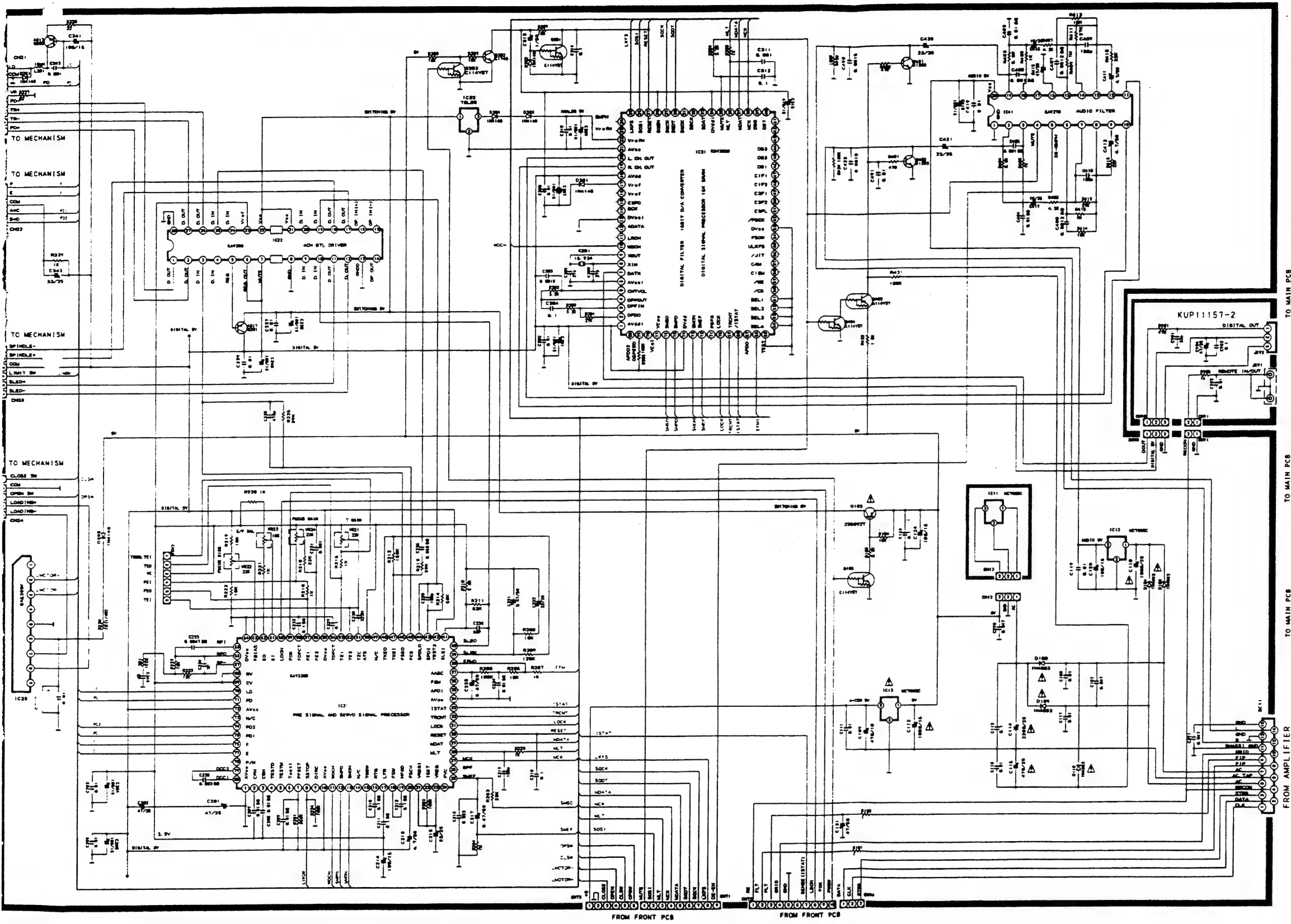


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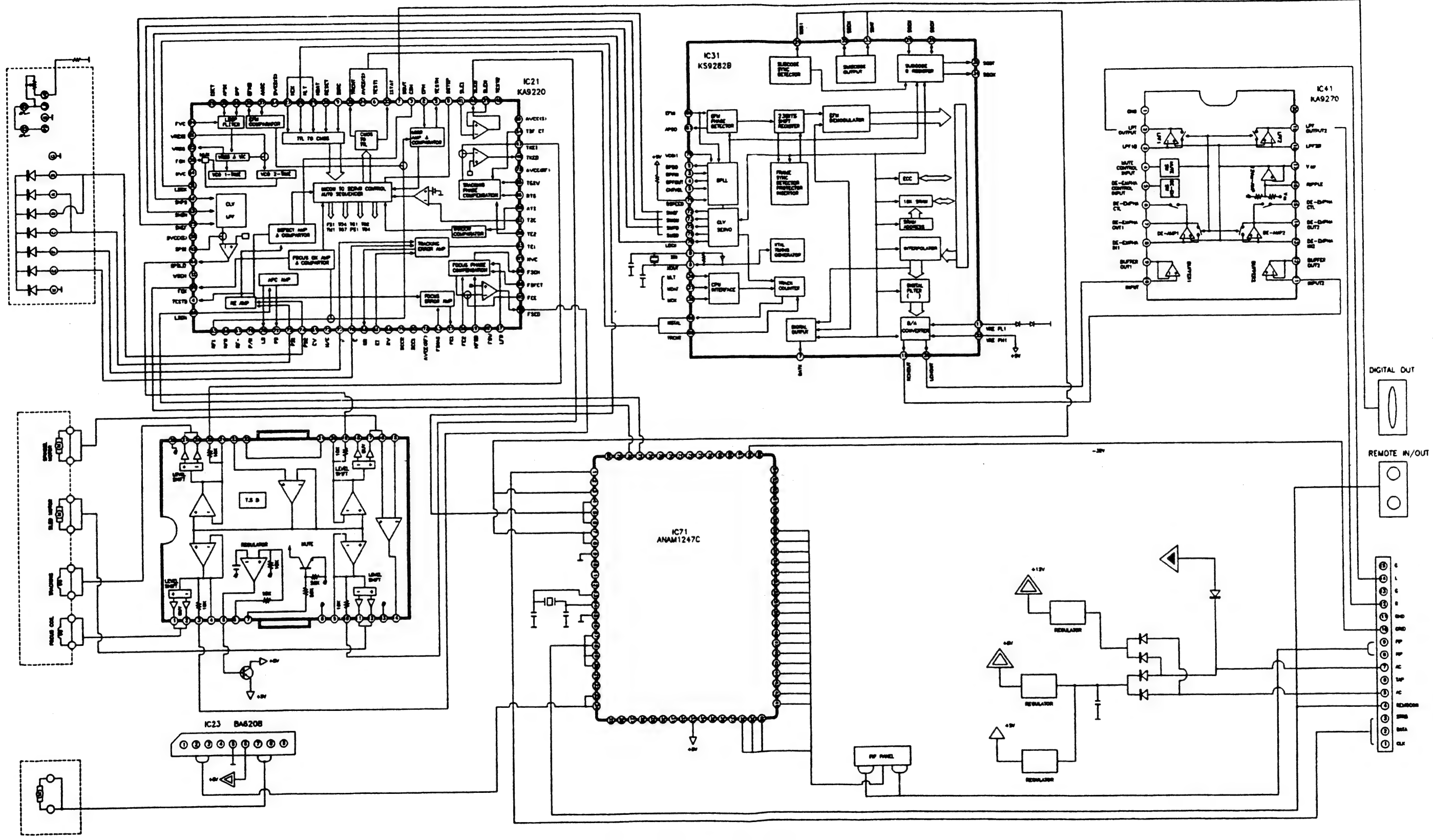
SCHEMATIC DIAGRAM

CD-Player CD4085



IMPORTANT SAFETY NOTICE:  
COMPONENT IDENTIFIED BY  $\Delta$  MARK HAVE SPECIAL CHARACTERISTICS.  
IMPORTANT FOR SAFETY: WHEN REPLACING ANY OF THESE COMPONENTS  
USE ONLY MANUFACTURER'S SPECIFIED PARTS.  
THE UNIT OF RESISTANCE IS OHM  
K = 1000 OHM, M = 1000 K OHM  
THE UNIT OF CAPACITANCE IS MICROFARAD (UF).  
F = 10<sup>-6</sup> UF  
THIS SCHEMATIC DIAGRAM MAY MODIFIED AT ANY TIME WITH THE  
IMPROVEMENT OF PERFORMANCE.

# BLOCK DIAGRAM

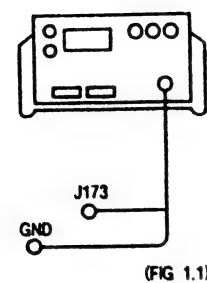
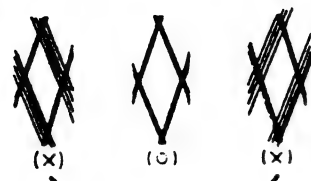
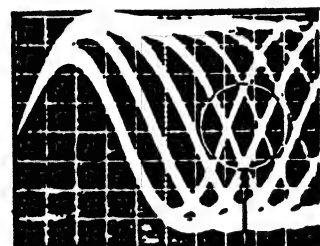


CD-Player CD4085

## MEASUREMENTS AND ADJUSTMENTS

### FOCUS OFF SET ADJUSTMENT

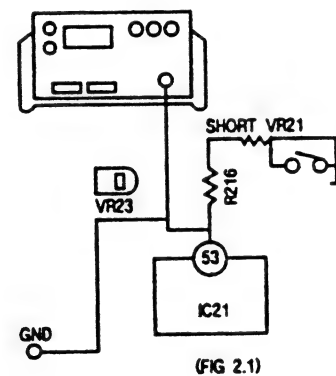
1. Test equipment connection is shown in Fig 1.1
2. Play the test disc.
3. Adjust VR22 so that the eye pattern of RF Signal is open widest. (Fig 1.2)



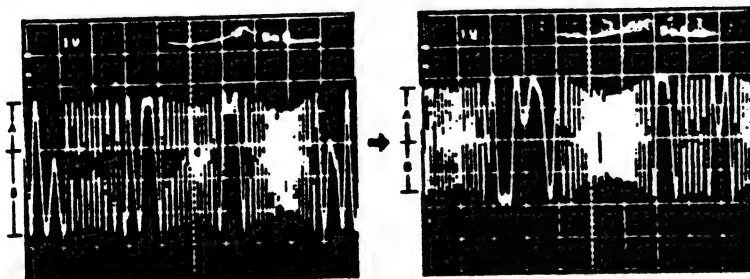
(FIG 1.1)

### E/F BALANCE ADJUSTMENT

1. Position the baseline trace of the oscilloscope to the center horizontal graticule line.  
Oscilloscope setting: VOLT .....1V/Div  
SWEEP .....2msec/Div
2. Turn on the power switch and play the track 1 of test disc.
3. Connect the oscilloscope to R216 (Pin 53 of the IC 21) (See Fig 2.1).
4. Short the VR21 Turn Fully clockwise, adjust the VR23 so that A=B (See Fig 2.2).  
Oscilloscope setting: VOLT .....1V/Div  
SWEEP .....5msec/Div  
INPUT COUPLING.....DC
5. When the F.L.T displays 00:00., press the play button and repeat procedure.
6. After adjustment, VR23 is center.

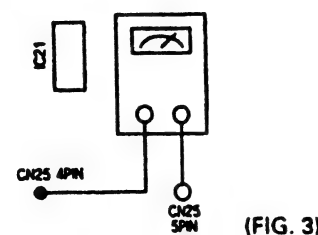


(FIG 2.1)



### FOCUS GAIN ADJUSTMENT

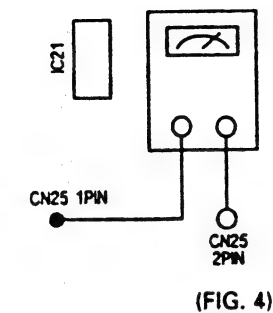
1. Test equipment connection is shown in Fig 3.
2. Play the test disc.
3. Adjust VR24 until monitor level at VTVM becomes 200 mV. (AC)



(FIG. 3)

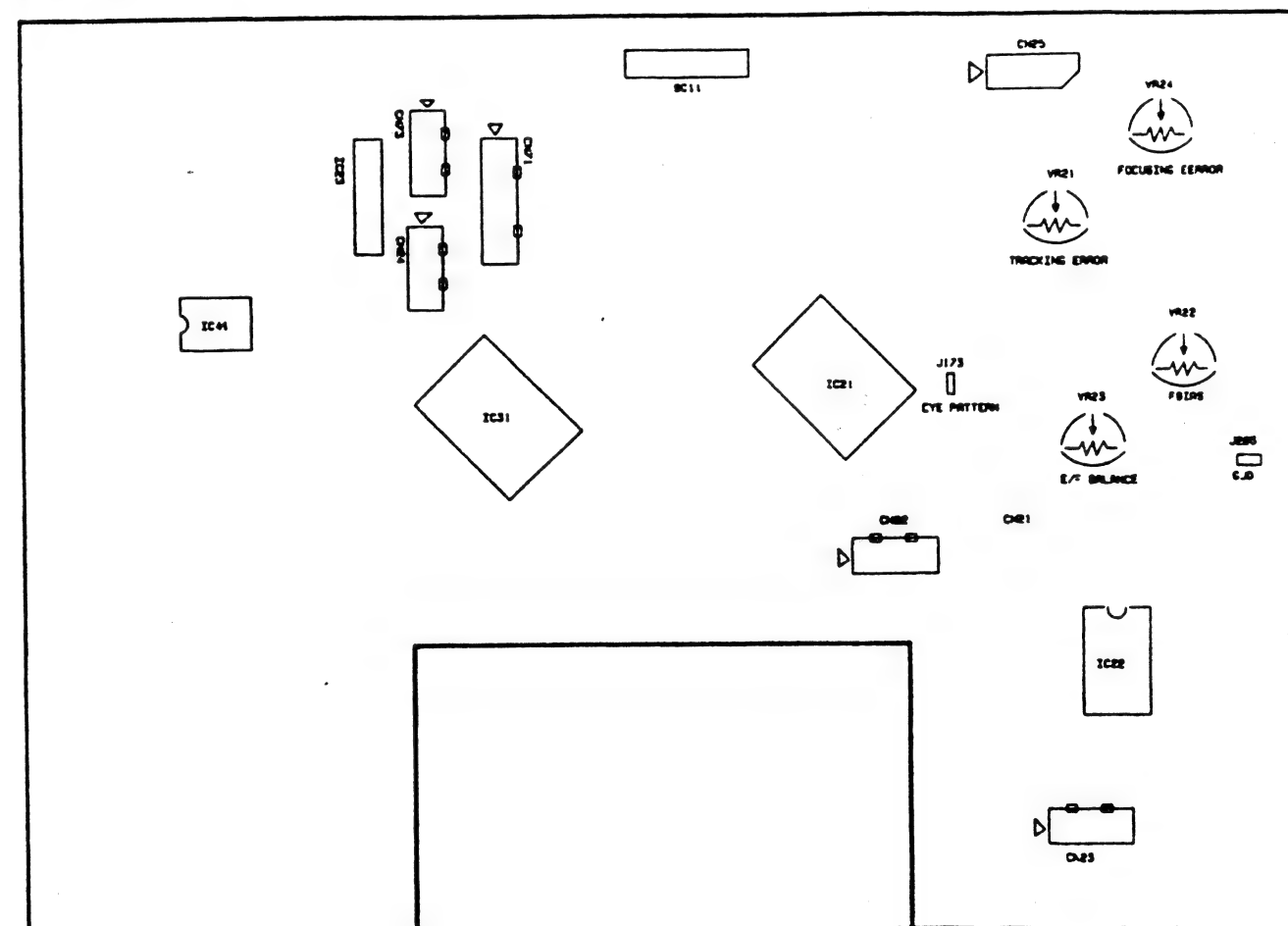
### TRACKING GAIN ADJUSTMENT

1. Test equipment connection is shown in Fig 4.
2. Play the test disc.
3. Adjust VR21 until monitor level VTVM becomes 150mV. (AC)



(FIG. 4)

### ■ ADJUSTMENT POINT



## KS9282B (DSP + DAC)

PIN No.	SYMBOL	I/O	DESCRIPTION
1	AVDD1		Analog Vcc1
2	UPDO	O	Charge pump output for master PLL
3	DP1IN	I	Filter input for master PLL
4	DPFOUT	O	Filter output for master PLL
5	CNTVOL	I	VCO control voltage for master PLL
6	AVSS1		Analog Ground 1
7	DATX	O	Digital audio output
8	XIN	I	X-tal oscillator input
9	XOUT	O	X-tal oscillator output
10	WDCH	O	Word clock of 48 bit/SLOT (Normal speed=88.2KHz, Double speed=176.4KHz)
11	LRCH	O	Channel clock of 48 bit/SLOT (Normal speed=44.1KHz, Double speed=88.2KHz)
12	ADATA	O	Serial audio data output of 48 bit/SLOT (MSB first)
13	DVSS1		Digital Ground 1
14	BCK	O	Audio data Bit clock for 48 bit/SLOT (Normal speed=7.1188KHz, Double speed=4.2336KHz)
15	C2PO	O	C2 pointer for output audio data
16	VREFL2	I	Input terminal 2 of reference voltage "L" (Floating)
17	VREFL1	I	Input terminal 1 of reference voltage "L" (GND Connection)
18	AVDD2		Analog VCC2
19	RCHOUT	O	Right-Channel audio output through D/A Converter
20	LCHOUT	O	Left-Channel audio output through D/A converter
21	AVSS2		Analog Ground 2
22	VREFH1	I	Input terminal 1 of reference voltage "H" (VDD connection)
23	VREFH2	I	Input terminal 2 of reference voltage "H" (Floating)
24	EMPH	O	Emphasis/Non-Emphasis Output ("H": Emphasis)
25	LKFS	O	The Lock Status output of frame sync
26	SOS1	O	Output of subcode sync signal (S0 + S1)
27	RESET	I	System reset at "L"
28	SOEN	I	SOCK IO Control ("L": Internal CK, "H": external CK)
29	SOCK	I/O	Clock for output Subcode-Q data
30	SODT	O	Serial output of Subcode-Q data
31	SOOK	O	The CRC check result signal output of subcode-Q
32	SBCK	I	CLOCK for output subcode-Q data
33	SDAT	O	Subcode serial data output
34	DVDD1		Digital Vcc1
35	MUTE	I	Mute control input ("H": Mute ON)
36	MLT	I	Latch Signal Input from Micom
37	MDAT	I	Serial data Input from Micom
38	MCK	I	Serial Clock Input from Micom
39	DB8	I/O	SRAM data I/O Port 8 (MSB)
40	DB7	I/O	SRAM data I/O Port 7
41	DB6	I/O	SRAM data I/O Port 6
42	DB5	I/O	SRAM data I/O Port 5
43	DB4	I/O	SRAM data I/O Port 4
44	DB3	I/O	SRAM data I/O Port 3
45	DB2	I/O	SRAM data I/O Port 2
46	DB1	I/O	SRAM data I/O Port 1 (LSB)
47	C1F1	I/O	Monitoring output for C1 error correction (RA1)
48	C1F2	I/O	Monitoring output for C1 error correction (RA2)
49	C2F1	I/O	Monitoring output for C2 error correction (RA3)
50	C2F2	I/O	Monitoring output for C2 error correction (RA4)
51	C2FL	I/O	C2 decoder flag (High: When the processing C2 code is impossible correction status) (RA5)
52	#BCK	I/O	Output of VCO/2 (Normal speed=4.3218MHz, Double speed=8.6436MHz) (RA6)
53	DVSS2		Digital Ground 2
54	PSDW	I/O	Unprotected frame sync (RA7)
55	ULKFS	I/O	Frame sync protection state (RA8)
56	JIT	I/O	Display of either RAM overflow or underflow for 24 frame jitter margin (RA9)
57	C4M	I/O	Only monitoring signal (Normal playback: 4.2336MHz) (RA10)
58	C14M	I/O	16.9344MHz signal output (RA11)
59	/VE	I/O	Terminal for test
60	/CS	I/O	Terminal for test
61	SEL1	I	Mode Selection Terminal 1 (H:33.8688MHz, L:16.9344MHz)
62	SEL2	I	Mode Selection Terminal 2 (H:APLL L:DPLL)
63	SEL3	I	Mode Selection Terminal 3 (H:CD ROM L:CDP)
64	SEL4	I	Mode Selection Terminal 4 (L: Internal SRAM)
65	TEST	I	Test Terminal (L=Normal operating state)
66	EFMI	I	EFM Signal Input
67	APDO	O	Charge Pump output for analog PLL
68	ISTAT	O	The internal status output
69	TRCNT	I	Tracking counter input signal
70	LOCK	O	Output signal of LKFS Condition sampled PBFR/16 (If LKFS is "H", Lock is "H" If the LKFS is sampled "L" at least 8 times by PBFR/16, Lock is "L")
71	PBFR	O	Write frame clock (Lock: 7.35KHz)
72	SMEF	O	LPF time constant control of the spindle servo error signal
73	SMON	O	ON/OFF control signal for spindle servo
74	DVDD2		Digital Vcc 2
75	SMPD	O	Spindle Motor drive (Rough control in the CLV-S mode Phase control in the CLV-P mode)
76	SMSD	O	Spindle Motor drive (Velocity control in the CLV-P mode)
77	VCOD1	O	Vco output signal (When the state is lock by means of PBFR, it is 8.643MHz)
78	VCOD	I	VCO Input signal
79	DSPEED	I	Double speed mode control (H:Normal Speed, L:Double Speed)
80	APD02	O	Analog PLL Charge Pump output for Double Speed mode

## KA9220B (RF + SERVO AMP)

PIN No.	SYSTEM	DESCRIPTION
1	AVEE (R)	Analog negative power supply input pin for RF part
2	CPH	Capacitor connection pin of mirror hold.
3	CBH	Capacitor connection pin of defect bottom-hold
4	TESTD	Defect test pin
5	TESTM	Mirror test pin
6	Test1	Input pin for test
7	PFSET	Peak frequency setting pin for focus, tracking compensation and f0 (cut off frequency) of CLV LPF.
8	SSTOP	Check the position pin of pick-up whether inside or not.
9	DIRC	Direct 1 Track jump Control Pin
10	AVCC (S)	Analog positive power supply input pin for SERVO part.
11	WDCH	Auto-sequencer clock input pin (Normal speed)=88.2KHz, Double speed=176.4KHz)
12	SMPD	Connection pin of DSP SMPD
13	SMON	Connection pin of DSP SMON, spindle servo ON at "H"
14	N/C	No connection pin
15	TGSW	Providing time constant to change the high frequency tracking gain
16	RTG	Capacitor connection pin to switch the tracking gain of high frequency
17	LFR	Capacitor connection pin to perform rising low bandwidth of focus servo loop
18	FSW	High frequency gain of focus servo loop can be changed by FS3 switch ON or OFF
19	HFGD	Reducing high frequency gain with capacitor connected between pin 18 and pin 19.
20	FSCH	Time constant external pin to generate focus search waveform
21	VREGI	External regulator voltage input pin for VCO
22	ISET	Determining the peak value of focus search, track jump and SLED kick
23	VREG	3.5V Regulator output pin
24	FVC	Pin connected external resistor to adjust free running frequency of VCO
25	SMEF	Providing an external LPF time constant of CLV SERVO Loop
26	BPE	Providing time constant for Loop filter of VCO
27	MCK	Clock input pin from micom
28	MLT	Latch input pin from micom
29	MDAT	Data input pin from micom
30	RESET	Reset input pin from micom, reset at "L"
31	LOCK	Pin for operation of the sled runaway prevention function at "L"
32	TRCNT	Track count output pin
33	ISTAT	Internal status output pin
34	AVEE (S)	Analog negative power supply input pin for SERVO part
35	APDI	Input pin of DSP phase comparison output (PHAS)
36	F0M	Output pin of analog VCO Normal speed=8.64 MHz, Double speed=17.28MHz
37	AASC	Auto Asymmetry control input pin
38	EFMO	EFM comparator output pin
39	SLEN	Non-inverting input pin of SLED SERVO amplifier
40	SLEO	Output pin of SLED SERVO amplifier
41	SLEI	Inverting input pin of SLED SERVO amplifier
42	TEST2	Test input pin to change speed mode Normal speed="H", Double speed="L"
43	SPDI	Inverting input pin of spindle servo amplifier
44	SPDO	Spindle servo amplifier output pin
45	FCE	Inverting input pin of focus servo amplifier
46	FSEO	Output pin of focus servo amplifier
47	TKEI	Non-inverting input pin of tracking servo amplifier
48	TKEO	Output pin of tracking servo amplifier
49	N/C	No connection
50	ATS	Anti-shock input pin
51	TZC	Tracking Zero Crossing input pin
52	TE2	Tracking Error Servo input pin
53	TE1	Output pin of tracking Error Amplifier
54	TDCT	Capacitor Connection pin for Defect Compensation of tracking servo
55	DVCC (S)	Digital positive power supply input pin for servo part
56	FE2	Focus error servo input pin
57	FE1	Output pin of focus error Amplifier
58	DFCT	Capacitor connection pin for defect compensation of focus servo
59	FOK	Output pin of Focus ok comparator
60	LDON	Laser diode ON/OFF control pin
61	EI	Feedback input pin of E I-V amplifier
62	EO	Output pin of E I-V Amplifier
63	FBIAS	Bias pin of non-inverting input of focus error amplifier
64	DVEE (S)	Digital negative power supply input for servo part
65	RFI	Output Signal of RF summing amplifier is inputted through capacitor
66	RFO	Output pin of RF summing amplifier
67	RF-	Inverting input pin of RF summing amplifier
68	RV	Output pin of (AVCC + AVEE)/2 Voltage
69	CV	Bias input pin of Center Voltage buffer
70	LO	Output pin of APC amplifier
71	PD	Input pin of APC amplifier
72	AVCC (R)	Analog positive power supply input pin for RF part
73	N/C	No connection
74	PD2	Inverting input pin of RF I-V AMP2
75	PD1	Inverting input pin of RF I-V AMP1
76	F	Inverting input pin of F I-V AMP
77	E	Inverting input pin of E I-V AMP
78	P/N	Selecting P-sub/N-sub of Laser diode
79	DCC2	Defect bottom-hold output is inputted through capacitor
80	DCC1	Output pin of defect bottom-hold



# IC31: ANAM1249T

PIN No.	SYMBOL	I/O	DESCRIPTION
1, 25	V <sub>DD</sub>	I	V <sub>DD</sub> : 5V ±10%
2-5	KLY0-KEY3	I	KEY MATRIX INPUT
98-100	KEY4-KEY9	O	KEY MATRIX OUTPUT
10, 13	SCK1, SI1, INT3	I	FQ DISPLAY DATA, CLOCK, STROBE
14-17	AIN0-AIN3	I	AREA OPTION
21	AIN7	I	STEREO INDICATOR INPUT
20	AIN6	I	SIGNAL DETECTOR
18	AIN4	I	KOREA MODE ZIG PORT
22, 30	V <sub>SS</sub>	I	DEVICE PORT
23	V <sub>ASS</sub>	I	ANALOG DEVICE PORT
24	V <sub>AREF</sub>	I	REFERENCE VOLT INPUT
26	STOP MODE	I	MEMORY HL
27	TEST	I	N.C (GND)
28	XTIN	I	32.768KHz CRYSTAL TIME OPERATOR
29	XTOUT	O	
31	X IN	I	8.0MHz CRYSTAL μ-COM OPERATOR
32	X OUT	O	
33	RESET	I	RESET SIGNAL INPUT
34	P10 (INT10) REMOTE IN	I	REMOTE CONTROL SIGNAL INPUT
35	INT1 REMOTE OUT	O	REMOTE CONTROL SIGNAL OUTPUT
36	INT2	I	RDS START INPUT
7	SCK2	I	RDS CLOCK INPUT
8	SI2	I	RDS DATA INPUT
48	P06	O	MUTE OUTPUT
42	P00-P03	I	DATA IN PLL IC CONTROL
43	P00-P03	I	CE PLL IC CONTROL
44	P00-P03	O	CLOCK PLL IC CONTROL
45	P00-P03	O	DATA OUT PLL IC CONTROL
50	V <sub>CC</sub>	-	30V
51-68	G16-G0	O	FIP GRID DRIVE OUTPUT
67-89	S6-S26	O	FIP SEGMENT DRIVE OUTPUT

# μ-COM IC(ANAM1250D)

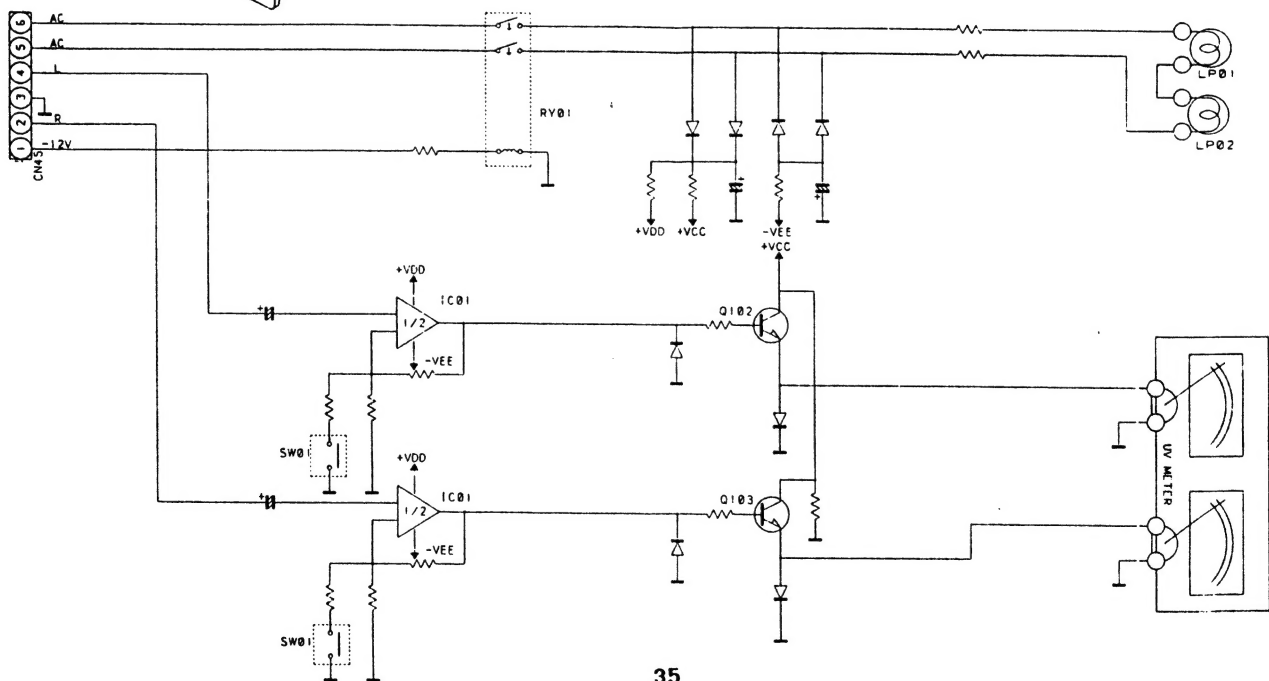
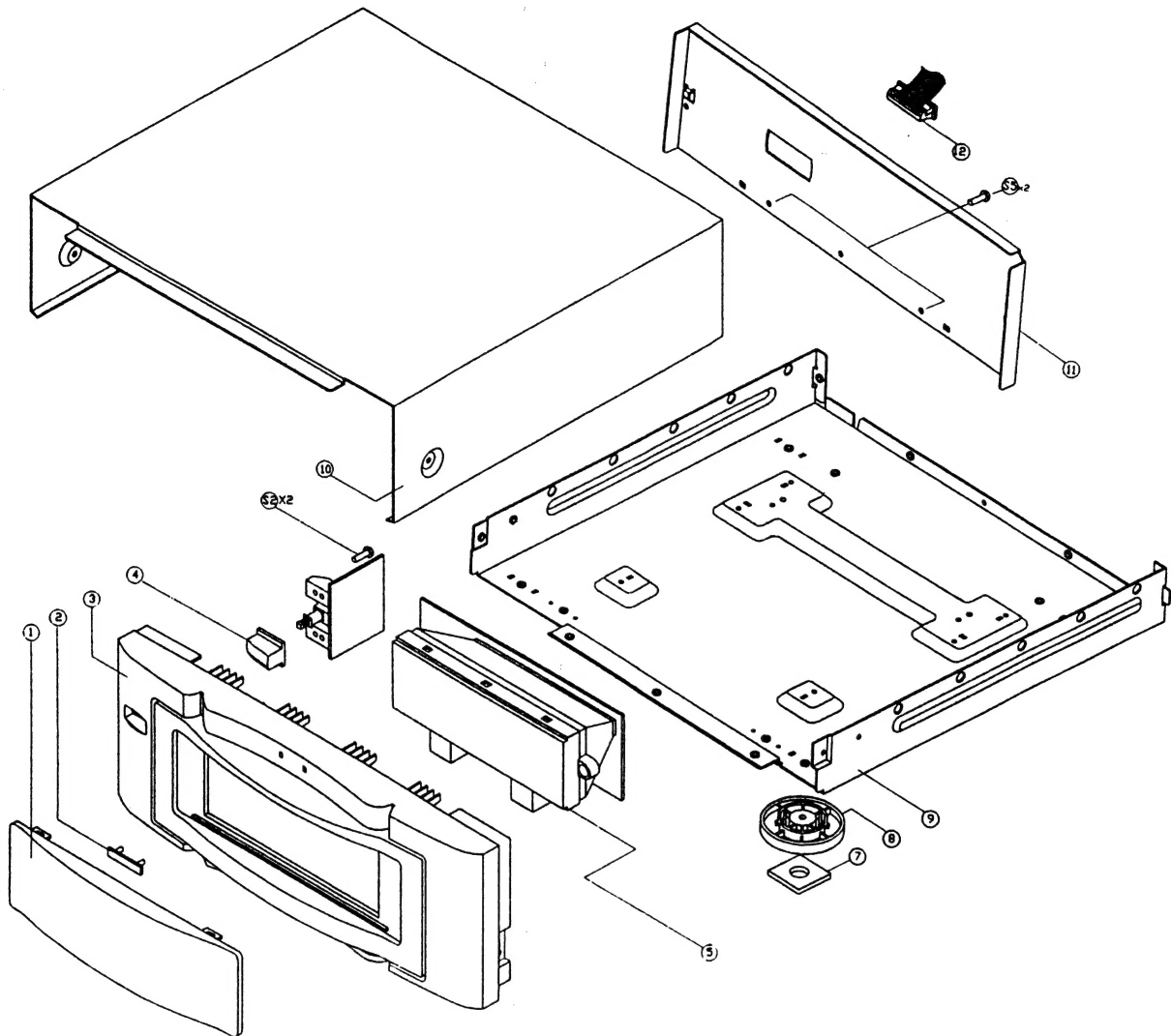
PIN No.	SYMBOL	IO	DESCRIPTION
40-43	P20-P23	I	KEY SCAN INPUT
44, 1, 2	P71-P73	O	KEY SCAN OUT
3	DATA	O	SERIAL DATA OUTPUT
4	CLK	O	SERIAL CLK OUTPUT
5	STB	O	SERIAL STROBE OUTPUT
6	REMO-O	O	REMOTE OUTPUT
7	MUTE	O	LINE MUTE
9	REPEAT	O	REPEAT LED DISPLAY
10	DOL-B	O	DOLBY-B OUTPUT
11	DOL-C	O	DOLBY-C OUTPUT
13	PAUSE	O	PAUSE LED DISPLAY
14	F-PLAY	O	FOR-PLAY LED DISPLAY
15	R-PLAY	O	REV-PLAY LED DISPLAY
16	REC	O	REC ON/OFF OUTPUT
17, 18	V <sub>SS</sub>	-	GND
20	RESET	I	RESET CONTROL PORT
21, 22	X1, 2	-	CRYSTAL IN/OUT PORT
23	MODE	O	REV-MODE LED DISPLAY
24	SOL	I	DECK SOLENOID CONTROL
25	MOTOR	I	DECK MOTOR CONTROL
26	REC-F	I	DECK FOR-REC SW DETECTOR
27	CL-MOT	O	LOADING CLOSE MOTOR CONTROL
28	OP-MOT	O	LOADING OPEN MOTOR CONTROL
29	PACK	I	DECK PACK SW DETECTOR
30	PLAY	I	DECK PLAY SW DETECTOR
31	REC-R	I	DECK REV-REC SW DETECTOR
32	HALL	I	DECK HALL IC DATA INPUT
33	OP-SW	I	LOADING OPEN SW DETECTOR
35	CL-SW	I	LOADING CLOSE SW DETECTOR
36	TPS	I	TPS DETECT PORT
37	REMO-IN	I	REMOTE INPUT PORT
39	V <sub>DD</sub>	-	V <sub>DD</sub> +5V

# IC71 (μ-COM) ANAM 1249C

PIN No.	SYMBOL	I/O	DESCRIPTION
1	RCIN	I	REMOCOM data input
2	MUTE	O	MUTE signal output
3	SUBQ LATCH	I	Sub code sync signal (S0+S1)
4	MLT	O	Latch signal output
5	MCK	O	Serial Clock output
6	MDATA	O	Serial data output
7	SUBQ DATA	I	Serial input of Subcode Q data
8	SUBQ CLK	I/O	Clock for output subcode Q data
9	GND	-	
10	-	-	Non connection
11	-	-	Non connection
12	RESET	-	Reset port
13	XIN	I	Ceramic oscillator input: 8MHz
14	XOUT	O	Ceramic oscillator output
15	GND	-	
16	-	-	Non connection
17	STB	I	Strobe input from DECK
18	-	-	Non connection
19	CLOCK	I	Clock input from DECK
20	DATA	I	Data input from DECK
21	GFS	I	The Lock Status input of fram sync
22	DEMPPH	O	Emphasis/Non Emphasis output ("H": Emphasis)
23	OPEN	O	Loading Motor open output
24	CLOSE	O	Loading Motor close output
25	CLSW	I	Close limit switch
26	OPSW	I	Open limit switch
27-32	-	-	Non connection
34-37	-	-	Non connection
38-49	G1-G12	O	Grid output data
50-58	S9-S1	O	Segment output data
59-65	-	-	Non connection
66	Vp	-	FLT power port (-32V)
67-73	KEY0-KEY7	-	Key read input port
76	SENS	I	The internal status input from DSP
77	LDON	O	Laser diode ON/OFF control port
78	FOK	I	Focus ok comparator pin
79	CD POWER	O	Power ON/OFF switch control port
80	RCOUT	O	Remoccon data output

# KA9258D (MOTOR DRIVER)

No.	SYMBOL	I/O	DESCRIPTION
1	DOL1	O	DRIVE OUTPUT
2	DOL2	O	DRIVE OUTPUT
3	DIL1	I	DRIVE INPUT
4	DIL2	I	DRIVE INPUT
5	REG	-	REGULATOR
6	VREG	O	VOLTAGE REGULATOR
7	MUTE	-	MUTE
8	GND1	-	GND
9	DI2.1	I	DRIVE INPUT
10	DI2.2	I	DRIVE INPUT
11	DO2.1	O	DRIVE OUTPUT
12	DO2.2	O	DRIVE OUTPUT
13	GND2	-	GND
14	OPOUT	O	OP AMP OUTPUT
15	OPIN (-)	I	OP AMP INPUT (-)
16	OPIN (+)	I	OP AMP INPUT (+)
17	DO3.1	O	DRIVE OUTPUT
18	DO3.2	O	DRIVE OUTPUT
19	DI3.1	I	DRIVE INPUT
20	DI3.2	I	DRIVE INPUT
21	Vcc1	-	Voltage Regulator (+8V)
22	Vcc2	-	Voltage Regulator (+8V)
23	VREF	-	2.5V BIAS REGULATOR
24	DI1.1	I	DRIVE INPUT
25	DI1.2	I	DRIVE INPUT
26	DO1.1	O	DRIVE OUTPUT
27	DO1.2	O	DRIVE OUTPUT
28	GND3	-	GND





# SCHEMATIC DIAGRAM

## VU-Meter VU4085

